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215532

Mr. Joseph Hudek
Pre-Remedial WAM
U.S. Environmental Protection Agency
Region II - Environmental Services Division
Edison, New Jersey 08837

RE: Franklin Plastic Site Inspection Prioritization Evaluation

Dear Mr. Hudek:

This following is a summary of the Site Inspection Prioritization evaluation of the Franklin Plastic site (CERCLIS ID No. NJD011121589) (Ref. No. 1).

General Description and Site History

The Franklin Plastic (FP) site is located along the Passaic River in Kearny, New Jersey. FP occupies approximately 8 acres in a mixed industrial/commercial portion of Kearny. The site is bounded to the west by the Passaic River, to the east by Passaic Avenue, to the north by a retail/warehouse complex, and to the south by industrial/manufacturing businesses (Ref. No. 2, pp. 22, 391). FP is a privately owned, active manufacturing facility which has been operating under the name Franklin Plastics Corp. from 1976 to the present. Congoleum Corporation/Floor Covering Division (CC/FD) owned the property from 1946 to 1974; CC/FD manufactured asphalt and/or vinyl tile on the premises. Refer to Figures 1 and 2 for a Site Location Map and Site Map, respectively (Ref. No. 2, p. 22).

FP receives plastic resin as a solid or powder, then adds pigment and varying amounts of plasticizer to the customer's specifications. The final product is PVC pellets, which are sold to individual customers for conversion into end products (Ref. No. 2, p. 22). FP is permitted to discharge noncontact cooling water to the Passaic River under New Jersey Pollutant Discharge Elimination System (NJPDES) Permit No. NJ0002194 (expires 3/31/97). FP's NJPDES Permit allows for a maximum discharge of 15,000 gallons per day (gpd) into the Passaic River via one outfall pipe located at the southwest corner of the property. Noncontact cooling water from the mixer jacket and roller mills, overflow from the cooling tower, and indoor trenches from the facility drain into a common open sump pit. The sump pit is divided into two sections; the first section is used for settling, while the second section is discharged into the Passaic River via the outfall pipe. In 1985 sample results from a Compliance Evaluation Inspection indicated that FP violated its NJPDES permit by exceeding limitations on chromium and zinc. The open sump pit is concrete lined and is directly connected to the outfall pipe on the Passaic River (Ref. Nos. 2, p. 7; 3; 4).

In January 1980 the U.S. Environmental Protection Agency (USEPA) performed a Preliminary Assessment of the FP site. The presence of leaking and/or overflowing drums was noted, the locations of which were unspecified. A USEPA contractor on-site reconnaissance in April 1990 discovered three areas of abandoned drums along the Passaic River. The drums were in poor condition; some drums were partially buried. The contents of the drums appeared to be crumbled pieces of tile. Solidified sludge from the vinyl tile

manufacturing process was also observed on the property (Ref. No. 2, p. 8).

Evaluation of Existing Information

In June 1984 a Preliminary Site Assessment (PSA) was conducted at the site by Hart Associates. As part of the PSA, Hart Associates collected four surface soil samples, including one composite sample from the dust collector area and three discrete samples from the tank farm area. Analysis of the samples indicated the presence of plasticizers (phthalates) and metals. Plasticizers found included bis(2-ethylhexyl) phthalate, butylbenzyl phthalate, dimethyl phthalate, and di-n-octyl phthalate. Priority pollutant metals detected included antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, and zinc. The quality assurance/quality control (QA/QC) used for these samples is unknown (Ref. No. 2, pp. 8, 660-671)

In February 1986 FP entered into an Administrative Order of Consent (AOC) with the Environment Clean-up Responsibility Act (ECRA) Enforcement Branch of the New Jersey Department of Environmental Protection (NJDEP). This was to allow FP to sell all capital stock to Spartech-Franklin, Inc., before completion of an ECRA investigation. The ECRA investigation conducted by Recon Systems, Inc. included the installation of seven monitoring wells; collection of core samples by split spoon at a depth of 6 to 12 inches below the ground surface and a depth of 6 inches above groundwater. Six of the monitoring wells were placed downgradient of possible waste sources. The seventh well, monitoring well No. 1 (MW-1) was intended to provide background or upgradient data, but during construction of MW-1, visible fuel oil contamination was observed. All monitoring well core samples were analyzed for priority pollutants. A total of 33 soil borings were collected on site at varying depths, ranging from 6 to 74 inches. Most samples were analyzed for full priority pollutants, except for areas with compound-specific concerns. For example, the samples collected in the transformer area were analyzed for polychlorinated biphenyls (PCBs) and petroleum hydrocarbons only. Analysis of the groundwater indicated the presence of bis(2-ethylhexyl) phthalate, chloroethane, arsenic, copper, lead, mercury, and zinc. However, due to the lack of an adequate upgradient sample it is not possible to determine if these contaminants are present at levels above background. Analysis of the soil samples indicated the presence of bis(2-ethylhexyl) phthalate, butylbenzyl phthalate, di-n-octyl phthalate, 1,1-dichloroethene, tetrachloroethane, n-nitrosodiphenylamine, 1,1,1-trichloroethane, methylene chloride, antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, and zinc. Also, due to the lack of an adequate background sample it is not possible to determine if these contaminants are present at levels above background. The QA/QC for these samples is unknown (Ref. Nos. 2, pp. 8-13, 389-634; 5, pp. 6, 32-35).

In July 1990 soil and groundwater samples were collected and analyzed as part of the continuing ECRA investigation. All samples were analyzed for volatile organic compounds (VOCs), base neutrals (phthalates), and priority pollutant metals. Results of the sampling indicated the presence of VOCs, phthalates, and heavy metals in both the soil and groundwater samples. The QA/QC for these samples is unknown. Also, due to the lack of an adequate background sample it is not possible to determine if these contaminants are present at levels above background (Ref. No. 5, pp. 7-12, 33-35).

The 1990 EPA SI included the collection and analysis of nine surface soil samples (including one duplicate sample), three surface water samples (including one duplicate surface water sample), and four sediment samples. Two soil samples were collected in proximity to two separate drum piles to characterize the material in abandoned drums found on site along the flood area of the Passaic River. One soil sample was a composite waste source sample collected directly from two of approximately 12 drums in Drum Area Number 2. One soil sample was collected near a solidified sludge pile near the Passaic River to characterize the waste source. Two soil samples were collected from areas of stained soils. One soil sample was collected from an area west of

the hoppers. One soil sample and one duplicate sample were collected from a drainage pathway east of the manufacturing building and property fence. One surface water sample was collected directly from the facility's discharge pipe (NJEP-SW1), and two surface water sample (NJEP-SW2 and NJEP-SW3) were collected from the sump pit located on the south face of the manufacturing building. One sediment sample was collected from condenser blowdown drainage path (NJEP-SED1), one sediment sample from the open sump pit (NJEP-SED2), and one sample from each of the two storm drains bordering the site. The samples were analyzed under the Contract Laboratory Program (CLP) for Target Compound List (TCL) and Target Analyte List (TAL) contaminants excluding cyanide. The analysis of the surface water sample collected from the outfall pipe on the Passaic River indicated the presence of chloroform, cadmium, copper, lead, and zinc. The analysis of the aqueous sample collected from the sump pit indicated the presence of chloroform, cadmium, copper, lead, and zinc. The analysis of the sediment sample collected from the sump pit indicated the presence of butylbenzyl phthalate, di- n-octyl phthalate, bis(2-ethylhexyl) phthalate, antimony, arsenic, beryllium, cadmium, copper, chromium, lead, mercury, nickel, and zinc. The analysis of the soil samples indicated the presence of 2-butanone, 4-methyl-2-pentanone, dibenzofuran, di-n-butyl phthalate, butylbenzyl phthalate, di- n-octyl phthalate, bis(2-ethylhexyl) phthalate, antimony, arsenic, cadmium, copper, chromium, lead, mercury, nickel, and zinc. The analysis of the composite waste source sample (NJEP-S2) indicated the presence of di-n-butyl phthalate, butylbenzyl phthalate, bis(2-ethylhexyl) phthalate, cadmium, copper, chromium, lead, mercury, nickel, silver, and zinc (Ref. No. 2, pp. 10, 16, 23-32, 78-86). Refer to Figure 2 and Table 1.

Hazard Assessment

Updated and additional information and data collected to further evaluate the site included groundwater population data, sensitive environment information, and four-mile radius populations.

Groundwater Pathway - The FP site is located in the City of Kearny in the Newark area. The Newark area lies wholly within the section of New Jersey underlain by the Brunswick Formation of the Newark Group. This formation consists of soft, reddish shale and red sandstone. In the vicinity of the site the Brunswick Formation is found at 50 feet below grade. The total thickness of the rocks of Triassic age in the Newark area is unknown but it is estimated to be between 6,000 and 7,000 feet Groundwater movement and storage in the Brunswick Formation is primarily due to the extensive fracturing of the rocks of which it is composed. The primary pore spaces in the rocks are generally so small that water moves through them very slowly, if at all under the hydraulic gradients that are established by pumping. The formation would yield very little water were it not for the fact that the formation has been extensively cracked and fractured. In the vicinity of the site, the bedrock is overlain by an estimated 30 feet of sand/silt, 10 feet of dense sand and gravel, and 5 feet of clayey silt, topped by 5 feet of urban fill. Sand and gravel are the most permeable of these geologic materials. The permeability of the Brunswick Formation is 10^{-3} to 10^{-5} centimeter/second (cm/sec). Groundwater flow is believed to be in a westerly direction towards the Passaic River. The depth to groundwater on the site ranges between 3 and 8 feet (Ref. Nos. 2, pp. 14, 334-338; 6, pp. 5-7).

Since the QA/QC for the groundwater samples is unknown, a release to groundwater cannot be documented (Ref. No. 2, pp. 9, 14).

No residents within four miles of the site utilize groundwater as their source of potable water (Ref. Nos. 7; 8). The proximity of the site to a wellhead protection area cannot be determined since wellhead protection areas are not delineated in the State of New Jersey (Ref. No. 9).

Surface Water Pathway - The nearest surface waterbody is the Passaic River, which is located immediately west of the site. The Passaic River forms the western border of the site, and at this point the river's course is southerly (Ref. Nos. 2, p. 16; 11). The surface water pathway for the site is part of the Newark Bay Complex. It consists of a 5.98 mile section of the Passaic River from the site to the junction of the Passaic River and the Newark Bay; a 6.09 mile section of Newark Bay from the mouth of the Passaic River and Newark Bay to the junction of Newark Bay and the Kill Van Kull; and a 2.93 mile section of the Kill Van Kull from the junction of the Newark Bay and the Kill Van Kull. The surface water pathway consists of brackish water bodies and is tidally influenced (Ref. No. 10).

One surface water sample was collected directly from the facility's outfall pipe (NJEP-SW1). The analysis of the sample indicated the presence of organic and inorganic contaminants. Refer to Figure 2 and Table 1. Since SW1 was collected from the outfall pipe on the Passaic River, a release to surface water via direct observation is documented (Ref. No. 2, pp. 10, 16).

Along the surface water pathway, the Passaic River, Newark Bay, and the Kill Van Kull are classified as SE3 by the NJDEP Surface Water Quality Standards (N.J.A.C. 7:9B). Class SE3 waterbodies are saline waters of estuaries designated for secondary contact recreation, maintenance and migration of fish populations, migration of diadromous fish, and maintenance of wildlife (Ref. Nos. 6, p. 7; 11). There are no potable surface water intakes along the surface water pathway of the site (Ref. No. 8). The Passaic River, Newark Bay, and the Kill Van Kull are considered fisheries; however, NJDEP advisory is in effect for the Newark Bay Complex, which comprises of Newark Bay, the Passaic River (up to Dundee Dam), and the Kill Van Kull. The advisory prohibits the sale or consumption of striped bass and blue crabs, and limits the consumption of bluefish, white catfish, and white perch (Ref. No. 12). One Federally and State-listed endangered species is located along the 15-mile surface water pathway (Ref. Nos. 10; 13). Along the surface water pathway there are 1.06 miles of wetlands frontage along the Passaic River, 4.05 miles of wetlands frontage along Newark Bay, and 0.19 miles of wetlands frontage along the Kill Van Kull (Ref. Nos. 10; 14).

Soil Exposure Pathway - The 1990 EPA SI included the collection and analysis of eight soil samples and one duplicate soil sample. The analysis of the samples indicated the presence of organic and inorganic contaminants. Refer to Figure 2 and Table 1 (Ref. No. 2, pp. 19-20, 23-32). There are 31 workers on site daily (Ref. No. 4). There are approximately 1336 people residing within 0.25 mile of the site (Ref. No. 15). The site is secured and inaccessible to the public (Ref. No. 4). There are no residences, schools, day care facilities or known terrestrial sensitive environments within 200 feet of the site (Ref. Nos. 2, pp. 22, 722; 4; 13).

Air Migration Pathway - Available documentation does not indicate that a release to air has occurred from the site. No readings above background were detected with an HNu photoionization detector during the EPA on-site reconnaissance and sampling event (Ref. No. 2, pp. 710-749). There are approximately 224 acres of wetlands within four-miles of the site (0-0.25 mile, 0; 0.25-0.50 mile, 0; 0.50-1.0 mile, 0; 1.0-2.0 miles, 16; 2.0-3.0 miles, 45; 3.0-4.0 miles, 163) (Ref. Nos. 10; 14). Approximately 523,604 individuals reside within the four-mile radius (0-0.25 mile, 1,336; 0.25-0.50 mile, 11,139; 0.50-1.0 mile, 45,096; 1.0-2.0 miles, 129,906; 2.0-3.0 miles, 159,147; 3.0-4.0 miles, 176,980) (Ref. Nos. 7; 15). Two Federally listed endangered species habitats are located within four miles of the site. Five State-listed endangered species habitats and one State-listed threatened species habitats are located within four miles of the site (Ref. Nos. 7; 13).

Summary

The Franklin Plastics (FP) site is located along the Passaic River in Kearny, New Jersey. FP occupies approximately 8 acres in a mixed industrial/commercial portion of Kearny. The site is bounded to the west by the Passaic River, to the east by Passaic Avenue, to the north by a retail/warehouse complex, and to the south by industrial/manufacturing businesses. FP receives plastic resin as a solid or powder, then adds pigment and varying amounts of plasticizer to the customer's specifications. The final product is PVC pellets, which are sold to individual customers for conversion into end products.

As part of the ECRA investigation of the FP facility, Recon Systems Inc. collected groundwater samples and soil samples in June 1987 and June 1990. The analytical data from the June 1987 sampling event indicated the presence of Aroclor 1242, bis(2-ethylhexyl) phthalate, chloroethane, arsenic, copper, lead, and zinc. The analytical data from the June 1990 sampling event indicated the presence of arsenic, beryllium, copper, lead, and zinc. The analysis of the June 1987 soil samples indicated the presence of bis(2-ethylhexyl) phthalate, butylbenzyl phthalate, di-n-butyl phthalate, di-n-octyl phthalate, n-nitrosodiphenylamine, 1,1,1-trichloroethane, 1,1-dichloroethene, methylene chloride, antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, and zinc. The analysis of the June 1990 soil samples indicated the presence of antimony, cadmium, chromium, copper, lead, and zinc. The QA/QC for these samples is unknown. Also, due to the lack of an adequate background soil sample and background groundwater sample, it is not possible to determine if these contaminants are present at levels above background.

As part of the 1990 EPA Site Inspection of the FP facility, soil samples and surface water/sediment samples were collected. The analysis of the surface water sample collected from a NJPDES-permitted outfall pipe on the Passaic River indicated the presence of chloroform, cadmium, copper, lead, and zinc. As a result, a release to surface water via direct observation is documented. The analysis of the aqueous sample collected from the sump pit indicated the presence of chloroform, cadmium, copper, lead, and zinc. The analysis of the sediment sample collected from the sump pit indicated the presence of butylbenzyl phthalate, di- n-octyl phthalate, bis(2-ethylhexyl) phthalate, antimony, arsenic, beryllium, cadmium, copper, chromium, lead, mercury, nickel, and zinc. The analysis of the soil samples indicated the presence of 2-butanone, 4-methyl-2-pentanone, dibenzofuran, di-n-butyl phthalate, butylbenzyl phthalate, di- n-octyl phthalate, bis(2-ethylhexyl) phthalate, antimony, arsenic, cadmium, copper, chromium, lead, mercury, nickel, and zinc. The analysis of the composite waste source sample (NJEP-S2) indicated the presence of di-n-butyl phthalate, butylbenzyl phthalate, bis(2-ethylhexyl) phthalate, cadmium, copper, chromium, lead, mercury, nickel, silver, and zinc. Although surface water and sediment samples were collected, none were collected from the Passaic River. Also, due to the lack of an adequate background sample it is not possible to determine if these contaminants are present at levels above background. Available documentation does not indicate that a release to air has occurred from the site. No readings above background were detected with an HNu photoionization detector during the EPA on-site reconnaissance and sampling event.

No residents within four miles of the site utilize groundwater as their source of potable water. These residents obtain their drinking water from the Wanaque Reservoir, which is not located along the 15-mile surface water pathway. The proximity of the site to a wellhead protection area cannot be determined since wellhead protection areas are not delineated in the State of New Jersey. Along the surface water pathway, the Passaic River, Newark Bay, and the Kill Van Kull are classified as SE3 by the NJDEP (where Class SE3 waterbodies are waters primarily for secondary contact recreational purposes). There are no surface water intakes along the surface water pathway of the site. The Passaic River, Newark Bay, and the Kill Van Kull are considered fisheries; however, a NJDEP advisory is in effect for the Newark Bay Complex, which comprises Newark Bay, the Passaic River, and the Kill Van Kull. The advisory prohibits the sale or consumption of striped bass and

blue crabs, and limits the consumption of bluefish, white catfish, and white perch. One Federally-listed endangered species is located along the 15-mile surface water pathway. Along the surface water pathway for the site there are 6.44 miles of wetlands frontage. There are 31 workers on-site daily. The site is secured and inaccessible to the public. There are no residences, schools, day care facilities or known terrestrial sensitive environments within 200 feet of the site. There are approximately 224 acres of wetlands within four-miles of the site. Approximately 523,604 individuals reside within the four-mile radius. Two Federally-listed endangered species habitats are located within four miles of the site. Five New Jersey State-listed endangered species habitats and one New Jersey State-listed threatened species habitat are located within four miles of the site.

Very truly yours,

BERNARD M. PIERRE
SITE MANAGER

LISA GRECO
TASK LEADER

ALAN GREENLAW
WORK ASSIGNMENT MANAGER

Table 1

FRANKLIN PLASTICS DATA
CONSTITUENTS DETECTED

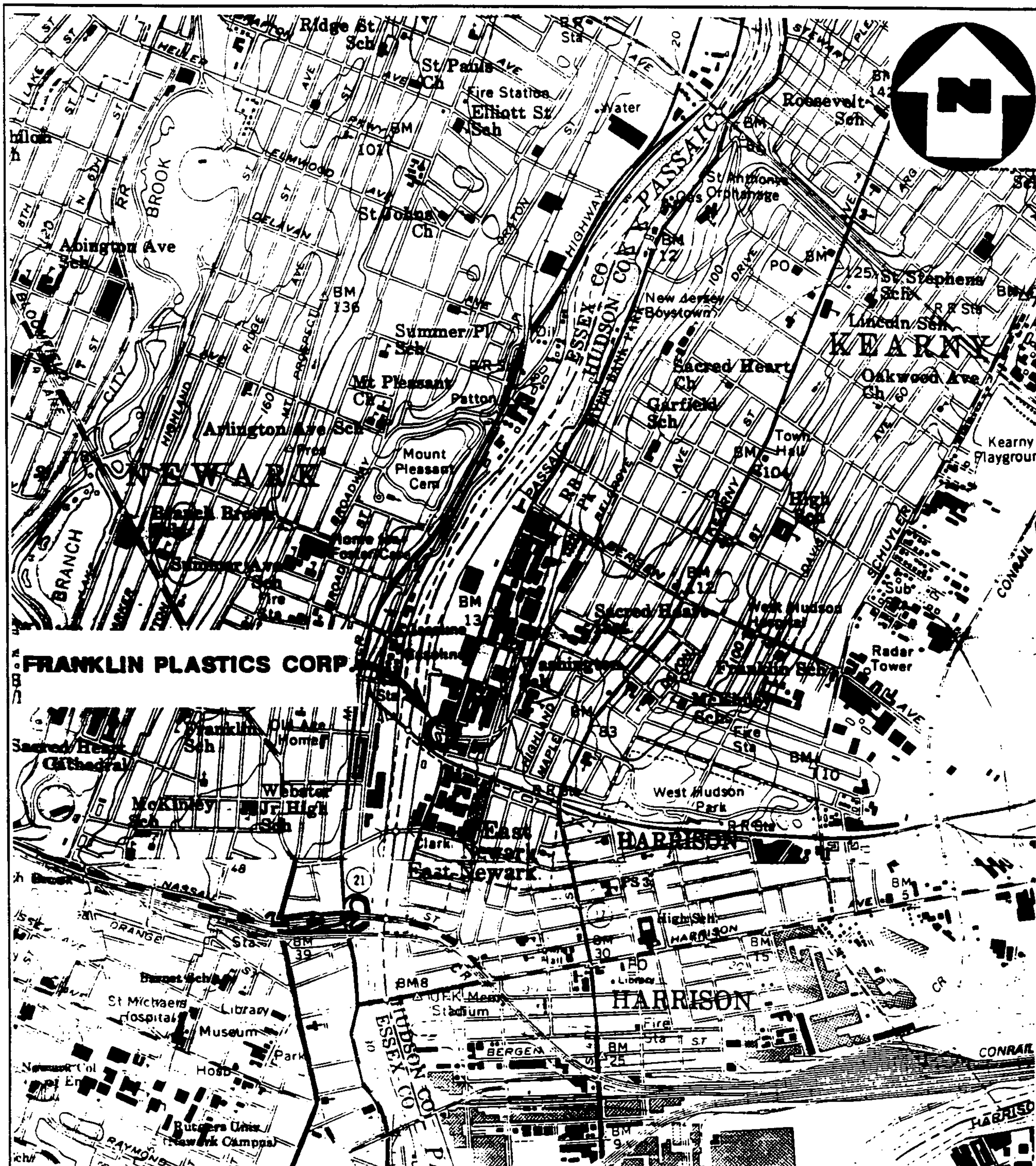
Constituent Detected	Sample Number	Media	Sample Depth (feet)	Concentration
Chloroform	NJEP-SW1	Aqueous (Discharge Pipe)		14 ppb
Chloroform	NJEP-SW2	Aqueous (Sump Pit)		14 ppb
Dibenzofuran	NJEP-S8	Soil	0 - 2	430 ppb
Bis(2-ethylhexyl)phthalate	NJEP-S2	Composite Drum Sample		110,000 ppb
Bis(2-ethylhexyl)phthalate	NJEP-S7	Soil	0 - 2	1.6×10^{6} ppb
Bis(2-ethylhexyl)phthalate	NJEP-SED2	Sediment (Sump Pit)		1.3×10^{7} ppb
Di-n-octylphthalate	NJEP-S6	Soil	0 - 2	78,000 ppb
Di-n-octylphthalate	NJEP-SED2	Sediment (Sump Pit)		800,000 ppb
Di-n-butylphthalate	NJEP-S1	Soil	0 - 2	500 ppb
Di-n-butylphthalate	NJEP-S2	Composite Drum Sample		34,000 ppb
Butylbenzyl phthalate	NJEP-S4	Soil	0 - 2	1.6×10^{7} ppb
Butylbenzyl phthalate	NJEP-S2	Composite Drum Sample	0 - 2	1.1×10^{7} ppb
Butylbenzyl phthalate	NJEP-SED2	Sediment (Sump Pit)		470,000 ppb
4-Methyl-2-pentanone	NJEP-SED1	Soil	0 - 2	30 ppb
2-Butanone	NJEP-SED1	Soil	0 - 2	29 ppb
Antimony	NJEP-S6	Soil	0 - 2	87.7 ppm
Antimony	NJEP-SED2	Sediment (Sump Pit)		49 ppm
Arsenic	NJEP-S6	Soil	0 - 2	14 ppm
Arsenic	NJEP-SED2	Sediment (Sump Pit)		68 ppm
Beryllium	NJEP-SED2	Sediment (Sump Pit)		17.5 ppm
Cadmium	NJEP-S6	Soil	0 - 2	78.2 ppm
Cadmium	NJEP-S2	Composite Drum Sample		29.2 ppm
Cadmium	NJEP-SW1	Aqueous (Discharge Pipe)		12.2 ppb
Cadmium	NJEP-SW3	Aqueous (Sump Pit)		13.1 ppb
Cadmium	NJEP-SED2	Sediment (Sump Pit)		202 ppm
Chromium	NJEP-S7	Soil	0 - 2	279 ppm
Chromium	NJEP-S2	Composite Drum Sample		76.5 ppm
Chromium	NJEP-SED2	Sediment (Sump Pit)		55.6 ppm
Copper	NJEP-S2	Composite Drum Sample		23.5 ppm
Copper	NJEP-SW1	Aqueous (Discharge Pipe)		28.8 ppb
Copper	NJEP-SW3	Aqueous (Sump Pit)		41.9 ppb
Copper	NJEP-SED1	Soil	0 - 2	327 ppm
Copper	NJEP-SED2	Sediment (Sump Pit)		327 ppm
Lead	NJEP-S6	Soil	0 - 2	2,520 ppm
Lead	NJEP-S2	Composite Drum Sample		299 ppm
Lead	NJEP-SW1	Aqueous (Discharge Pipe)		3.4 ppb
Lead	NJEP-SW3	Aqueous (Sump Pit)		18.7 ppb
Lead	NJEP-SED2	Sediment (Sump Pit)		818 ppm

ppm: parts per million
ppb: parts per billion

Table 1 Continued
FRANKLIN PLASTICS DATA
CONSTITUENTS DETECTED

Constituent Detected	Sample Number	Media	Sample Depth (feet)	Concentration
Mercury	NJEP-S2	Composite Drum Sample		0.16 ppm
Mercury	NJEP-S3	Sediment		0.25 ppm
Mercury	NJEP-SED1	Soil	0 - 2	0.31 ppm
Mercury	NJEP-SED2	Sediment (Sump Pit)		0.25 ppm
Nickel	NJEP-S7	Soil	0 - 2	134 ppm
Nickel	NJEP-S2	Composite Drum Sample		45.7 ppm
Nickel	NJEP-SED2	Sediment (Sump Pit)		39.8 ppm
Silver	NJEP-S2	Composite Drum Sample		36.9 ppm
Zinc	NJEP-S2	Composite Drum Sample		78.8 ppm
Zinc	NJEP-S7	Soil	0 - 2	1010 ppm
Zinc	NJEP-SW1	Aqueous (Discharge Pipe)		22.5 ppb
Zinc	NJEP-SW3	Aqueous (Sump Pit)		35 ppb
Zinc	NJEP-SED2	Sediment (Sump Pit)		759 ppm

ppm: parts per million
ppb: parts per billion



Scale: 0 1000 2000 4000 FEET

MAP SOURCE:

Based on U.S.G.S. 7.5 Minute Series Topographic Map.

Quadrangle of "Orange, NJ", Dated 1955

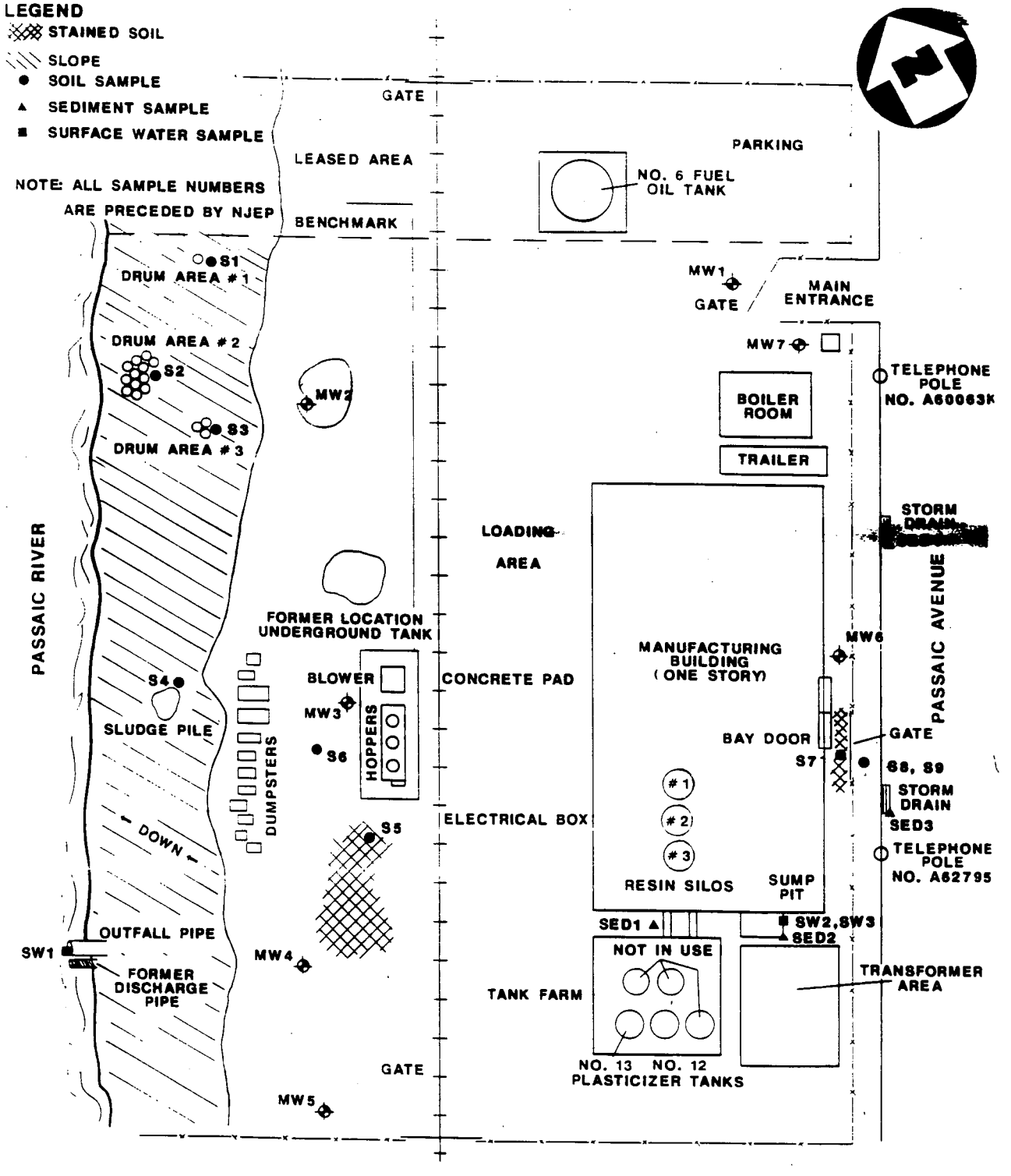
Photo Revised 1981

N

SITE LOCATION MAP
FRANKLIN PLASTICS CORP.
KEARNY, HUDSON, NEW JERSEY

MALCOLM PIRNIE

DATE: 24 JULY 95 | **FIGURE 1**



MALCOLM PIRNIE

SAMPLE LOCATION MAP
FRANKLIN PLASTICS SITE
KEARNY, HUDSON COUNTY, NEW JERSEY

DATE: 10 AUG 95 | FIGURE 2

ATTACHMENT 1

REFERENCES

1. U.S. Environmental Protection Agency (EPA) Superfund Program, Comprehensive Environmental Response Liability Information System (CERCLIS), List 8: Site/Event Listing, p. 56, June 7, 1995.

2. Site Inspection Report, Franklin Plastics Corp., City of Kearny, Hudson County, New Jersey, NUS Corporation Superfund Division, September 1990.

3. Telecon Note: Conversation between Walter Olivant, New Jersey Department of Environmental Protection (NJDEP) and Bernard Pierre, Malcolm Pirnie, Inc., August 4, 1995.

4. Telecon Note: Conversation between Mario Zucchi, Franklin Plastics Corp. and Bernard Pierre, Malcolm Pirnie, Inc., August 14, 1995.

5. Results of Sampling and Analysis Plan Implementation and Proposed Cleanup Plan at Franklin Plastics Corp., City of Kearny, Hudson County, New Jersey, ECRA Case No. 86206, Recon Systems Inc., August 1990.

6. Volume II. Report on Comparison of Remedial Alternatives for Phthalate Contamination for Franklin Plastics Corp., City of Kearny, Hudson County, New Jersey, ECRA Case No. 86206, Recon Systems Inc., April 1992.

7. Four-mile Vicinity Map for the Franklin Plastics site based on USGS Topographic Maps, 7.5 minute series, Quadrangles of "Jersey City, NJ-NY" 1967, Photorevised 1981; "Elizabeth, NJ-NY" 1967, Photorevised 1981; "Weehawken, NJ-NY" 1967, Photorevised 1981; "Orange, NJ" 1955, Photorevised 1981.

8. Project Note: To Franklin Plastics site file, from Bernard Pierre, Malcolm Pirnie, Inc., August 24, 1995. Subject: Drinking Water Sources.

9. Telecon Note: Conversation between James Gaffney, NJDEP- Bureau of Water Supply Planning and Gary Bielen, Malcolm Pirnie, Inc., December 16, 1994.

10. Fifteen Mile Surface Water Pathway Map for the Franklin Plastics site based on New Jersey State Wetlands Inventory Map for "Jersey City, NJ-NY"; "Elizabeth, NJ-NY"; "Weehawken, NJ-NY"; "Orange, NJ".

11. Surface Water Quality Standards, N.J.A.C. 7:9B, NJDEP, Office of Land and Water Planning, April 1994.

12. Project Note: To Franklin Plastics site file, from Bernard Pierre, Malcolm Pirnie, Inc., August 15, 1995, Subject: Fishery Information.

13. Project Note: To Franklin Plastics site file, from Bernard Pierre, Malcolm Pirnie, Inc., August 15, 1995, Subject: Sensitive Environments.

14. Project Note: To Franklin Plastics site file, from Bernard Pierre, Malcolm Pirnie, Inc., August 22, 1995. Subject: Wetlands Acreage & Frontage.

15. Project Note: To Franklin Plastics site file, from Bernard Pierre, Malcolm Pirnie, Inc., July 28, 1995. Subject: Population.

REFERENCE NO. 1

[redacted]6371[redacted]	FRA[redacted] BUR[redacted]E #[redacted]	[redacted]	[redacted]	00	[redacted]	09/[redacted]	09[redacted]0 EP[redacted]UND)
	LINCOLN AVE & STANTON AVE				RV2	03/26/93	05/25/93 EPA (FUND)
	FRANKLIN TWP	NJ 08322			PA1	10/01/90	12/28/90 EPA (FUND)
	015 GLOUCESTER				SI1	07/01/91	09/25/91 EPA (FUND)
					AR1	08/07/92	EPA (FUND)
					AR2	04/09/93	EPA (FUND)

RUN DATE: 07/07/95 14:35:37 ** PROD VERSION ** PAGE: 56
CERCLIS DATA BASE DATE: 06/07/95 U.S. EPA SUPERFUND PROGRAM CERHELP DATA BASE DATE: N/A
CERCLIS DATA BASE TIME: 16:22:13 ** C E R C L I S ** CERHELP DATA BASE TIME: N/A
VERSION 5.03 LIST-8E: SITE/EVENT LISTING

SELECTION:
SEQUENCE: REGION, STATE, SITE NAME

EVENTS: ALL

EPA ID NO.	SITE NAME / STREET / CITY / COUNTY CODE AND NAME (ASSOCIATED NPL SITE)	STATE	ZIP	CONG DIST.	OPRBLE UNIT	EVENT TYPE	EVENT QUAL	ACTUAL START DATE	ACTUAL COMPL DATE	EVENT LEAD
NJD986520649	FRANKLIN BURN SITE #3				00	RS1		06/17/91	02/11/93	EPA (FUND)
	MARSHALL MILL RD					RV1		02/17/93	05/25/93	EPA (FUND)
	MALAGA	NJ	08328			AR1		02/24/93		EPA (FUND)
	015 GLOUCESTER									
NJD986520656	FRANKLIN BURN SITE #4				00	RS1		06/17/91	09/29/92	EPA (FUND)
	MARSHALL MILL RD					RV1		10/26/92	05/25/93	EPA (FUND)
	FRANKLIN TOWNSHIP	NJ	08328			AR1		11/03/92		EPA (FUND)
	015 GLOUCESTER									
NJD986520664	FRANKLIN BURN SITE #5				00	RS1		06/17/91	07/27/92	EPA (FUND)
	MARSHALL MILL RD					RV1		09/24/92	05/25/93	EPA (FUND)
	FRANKLIN TOWNSHIP	NJ	08328			AR1		11/03/92		EPA (FUND)
	015 GLOUCESTER									
NJD986533543	FRANKLIN BURN SITE #6				00	RV1		10/19/92	05/25/93	EPA (FUND)
	1500 FOOT N.E MARSHALL MILL RD					AR1		11/03/92		EPA (FUND)
	FRANKLINVILLE	NJ	08322							
	015 GLOUCESTER									
NJD986541637	FRANKLIN BURN SITE #7				00	RV1		01/26/93	05/25/93	EPA (FUND)
	2000 N.E OF MARSHALL MILL ROAD					AR1		02/08/93		EPA (FUND)
	FRANKLIN TOWNSHIP	NJ	08322							
	015 GLOUCESTER									
NJD000038166	FRANKLIN CROSSINGS				00	RS1		10/05/93	02/06/94	EPA (FUND)
	FOX LANE AND FRANKLIN TURNPIK									
	MAHWAH	NJ	07430							
	003 BERGEN									
NJD011121589	FRANKLIN PLASTIC				00	RS1		11/08/90	04/29/91	EPA (FUND)
	113 PASSAIC AVE					DS1			01/01/80	EPA (FUND)
	KEARNY	NJ	07032			PA1			06/01/80	EPA (FUND)
	017 HUDSON					SI1		07/01/90	09/25/90	EPA (FUND)
NJD980505184	FREQUENCY ENG				00	DS1			07/01/79	EPA (FUND)
	LAKEWOOD RD					PA1			10/01/80	STATE(FUND)
	FARMINGDALE	NJ	07727			PA2		05/01/89	07/06/89	STATE(FUND)
	025 MONMOUTH					SI1		06/30/89	09/29/89	STATE(FUND)

REFERENCE NO. 2

NUS CORPORATION
A Halliburton Company

FIELD INVESTIGATION TEAM ACTIVITIES AT UNCONTROLLED HAZARDOUS SUBSTANCES FACILITIES — ZONE I

NUS CORPORATION
SUPERFUND DIVISION

02-9002-24-SI
REV. NO. 0

FINAL DRAFT
SITE INSPECTION REPORT
FRANKLIN PLASTICS CORP.
VOLUME 1 OF 2
PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-9002-24
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER 17, 1990

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY:

DAVE GRUPP
PROJECT MANAGER

KATHY CAMPBELL
SITE MANAGER

REVIEWED/APPROVED BY:

RONALD M. NAMAN
FIT OFFICE MANAGER

LEVEL I SITE INSPECTION REPORT

PART I: SITE INFORMATION

1. Site Name/Alias Franklin Plastics Corp.
   Street 113 Passaic Avenue
   City Kearny State New Jersey Zip 07032
2. County Hudson County Code 017 Cong. Dist. 14
3. EPA ID No. NJD011121589
4. Latitude 40° 45' 16" N Longitude 74° 09' 48" W
   USGS Quad. Orange, New Jersey - New York
5. Owner Franklin Plastics Corp. Tel. No. (201) 998-8002
   Street 113 Passaic Avenue
   City Kearny State New Jersey Zip 07032
6. Operator Franklin Plastics Corp. Tel. No. (201) 998-8002
   Street 113 Passaic Avenue
   City Kearny State New Jersey Zip 07032
7. Type of Ownership
   ☒ Private ☐ Federal ☐ State
   ☐ County ☐ Municipal ☐ Unknown ☐ Other
8. Owner/Operator Notification on File
   ☐ RCRA 3001 Date ☒ CERCLA 103c Date 01/80
   ☐ None ☐ Unknown
9. Permit Information

Permit	Permit No.	Date Issued	Expiration Date	Comments
NJPDES	NJ0002194	06/28/85	07/31/90	

10. Site Status
    ☒ Active ☐ Inactive ☐ Unknown
11. Years of Operation 1976 to Present

12. Identify the types of waste units (e.g., landfill, surface impoundment, piles, stained soil, above- or below-ground tanks or containers, land treatment, etc.) on site. Initiate as many waste unit numbers as needed to identify all waste sources on site.

(a) Waste Management Areas

Waste Unit No.	Waste Unit Type	Facility Name for Unit
1	Stained Soil Area No. 1	Soil Southwest of Blower Pad
2	Stained Soil Area No. 2	Soil East of Expansion Chamber
3	Noncontact Cooling Water Discharge	NJPDES Permit No. NJ0002194
4	Tank Farm Area	Plasticizer Tank Farm
5	Abandoned Drums and Sludge Pile	Abandoned Drums and Sludge Pile

(b) Other Areas of Concern

Identify any miscellaneous spills, dumping, etc. on site; describe the materials and identify their locations on site.

The NJ Department of Environmental Protection Investigative Report of December 20, 1984, observed the premises to be clean, except for minor spills of oils in the truck unloading area and minor spills of white-powdered resins from manufacturing. The resins were reported to be cleaned up at the end of each working day. Franklin Plastics received a Notice of Violation for oily spills along the eastern wall of the main building. These spills probably were due to the release of oil-contaminated steam. On January 5, 1985, Franklin Plastics informed the NJDEP that they had removed 25-45 lbs. of material from this contaminated area and disposed of it in the garbage.

Franklin Plastics maintains one No. 6 fuel oil tank, which is located on the northern, leased portion of the site. The capacity of this aboveground tank is approximately 50,000 gallons. In June 1984, New England Pollution Control Company developed a Spill Prevention, Control, and Countermeasure (SPCC) Plan for Franklin Plastics Corp. A 6,000-gallon underground gasoline tank was removed on February 4, 1986. Upon the tank's removal, surrounding soil appeared to be contaminated from gasoline leakage.

Environment Cleanup Responsibility Act (ECRA) sampling results of July 1987 collected from a former sink discharge area indicate the presence of phthalates. The sink was used by maintenance employees and discharged directly to the surface. Analysis of a surface soil sample from this area indicated the presence of bis(2-ethylhexyl) phthalate (340 ppm), butylbenzyl phthalate (51 ppm), and di-n-octyl phthalate (14 ppm). A petroleum hydrocarbon concentration of 19,000 ppm was reported. The sink in no longer in use.

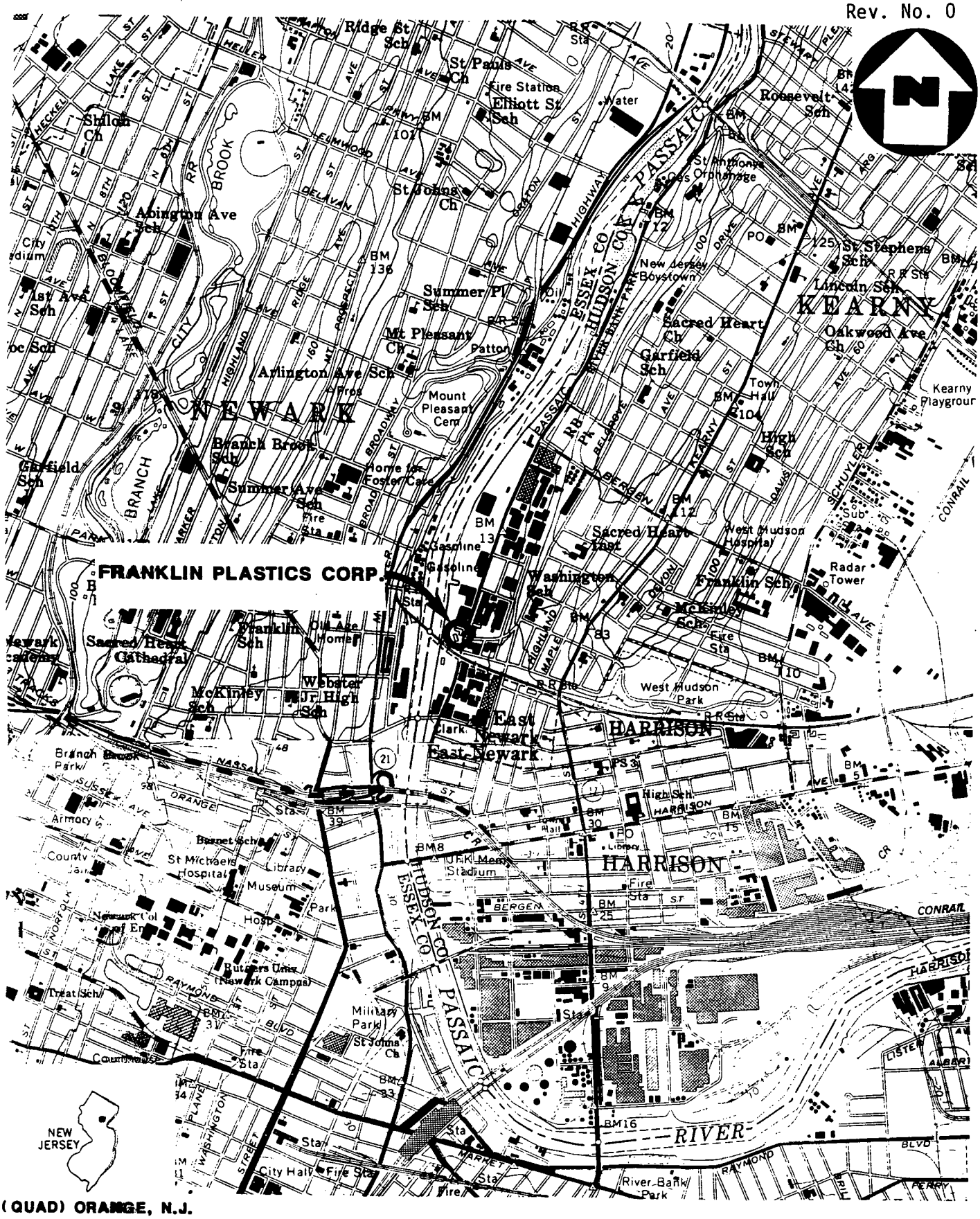
An on-site reconnaissance performed by NUS Corp. Region 2 FIT in April 1990 noted a condenser blowdown drainage path between the southwest edge of the manufacturing building and the tank farm. The liquid in this drainage ditch was golden/brown in color; its exact constituents are unknown.

Ref. Nos. 2,4, 5,6,13,24,29

13. **Information available from**

Contact Amy Brochu Agency U.S. EPA Tel. No. (201) 906-6802

Preparer K. Campbell Agency NUS Corp. Region 2 FIT Date Sept. 17, 1990



(QUAD) ORANGE, N.J.

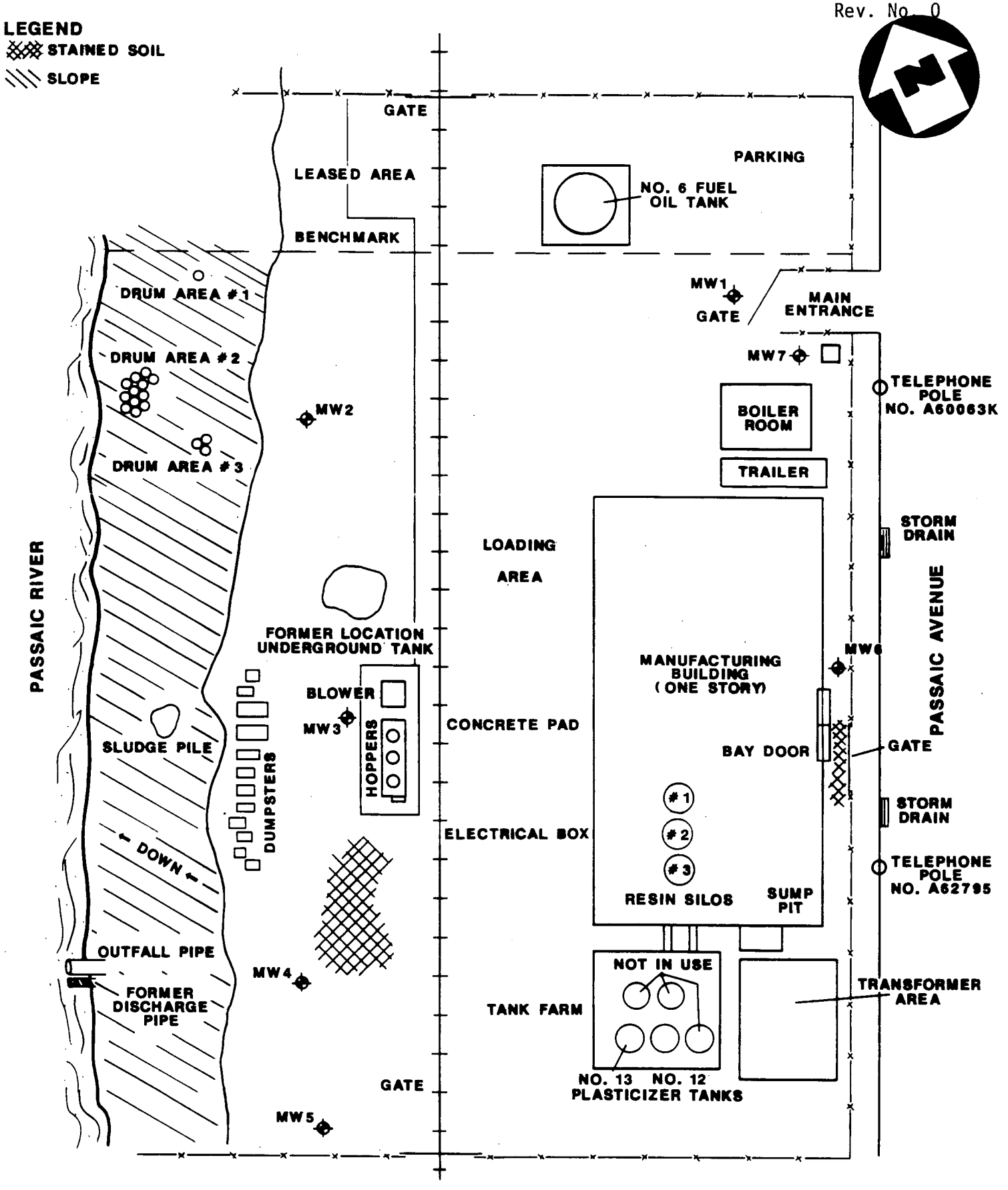
FIGURE 1

SITE LOCATION MAP

FRANKLIN PLASTICS CORP., KEARNY, N.J.

SCALE: 1" = 2000'

NUS CORPORATION



SITE MAP

FRANKLIN PLASTICS CORP., KEARNY, N.J.

NOT TO SCALE

FIGURE 2

NUS CORPORATION

PART II: WASTE SOURCE INFORMATION

Franklin Plastics Corp. is located in Kearny, Hudson County, New Jersey. The facility is a compounder of polyvinyl chloride (PVC) pellets. Figures 1 and 2 provides a site location map and a site map, respectively.

Stained Soil Area No. 1 is located off the southwest corner of the manufacturing building, approximately 10 feet west of the railroad tracks. The darkly stained soil occupies approximately 50 square yards; the specific hazardous chemical constituents, if any, are unknown. The area is unlined with no cover. Shallow groundwater exists at approximately 5 feet. The property is entirely fenced except along the Passaic River boundary, limiting the potential for direct contact.

Stained Soil Area No. 2 is located along the eastern face of the manufacturing building, near the facility's bay door. The patches of dark soil encompass approximately 10 square yards and may be attributable to oil-contaminated steam discharged from the facility. The exact contaminants, if any, are unknown at present. The area is unlined with no cover. During an on-site reconnaissance performed by NUS Corp. Region 2 FIT on April 30, 1990, a drainage pathway was observed from this stained soil area across a public access area to Passaic Avenue, approximately 20 feet north of a storm drain maintained by the City of Kearny (Ref. No. 24).

Franklin Plastics Corp. is permitted to discharge noncontact cooling water under New Jersey Pollutant Discharge Elimination System (NJPDES) Permit No. NJ0002194. Franklin Plastics Corp.'s NJPDES Permit allows for a maximum discharge of 15,000 gallons per day (gpd) into the Passaic River via one outfall pipe (DSN001) located at the southwest corner of the property. Noncontact cooling water from the mixer jacket and roller mills, overflow from the cooling tower, and indoor trenches from the facility drain into a common open sump pit (Ref. No. 23). The sump pit is divided into two sections; the first section is used for settling, while the second section is discharged into the Passaic River via DSN001. The sump pit is reportedly emptied and cleaned out annually. Analytical data of NUS Corporation Region 2 FIT site inspection samples collected from the sump pit indicate the presence of high concentrations of inorganic contaminants and volatile organics, including chloroform, bromodichloromethane, ethylbenzene, and xylenes. The open sump pit is concrete-lined and is directly connected to the discharge pipe into the Passaic River (Ref. No. 24). Sample results from a Compliance Evaluation Inspection conducted on July 16, 1985 indicated that Franklin Plastics Corp. violated its NJPDES permit by exceeding limitations on temperature, chromium, and zinc (Ref. No. 32). A Compliance Evaluation Inspection conducted on July 13, 1989 found Franklin to be in violation of its NJPDES permit for not having reported maximum values on the discharge monitoring reports for the period May 1, 1988 to April 30, 1989 (Ref. No. 1). Franklin Plastics Corp. violated its NJPDES permit for the period ending in October 1988 for failure to submit a discharge monitoring report (Ref. No. 25)

The tank farm area is located along the southern face of the manufacturing building. Two of the five plasticizer tanks are currently being utilized; each has a capacity of approximately 20,000 gallons. Tank No. 12 contains di-n-octyl phthalate; Tank No. 13 contains Jayflex 251. Both compounds are used as plasticizers as part of the manufacturing process. The storage tanks being used appear to be in fair condition; the three tanks not being used appear to be in poor condition. It is unknown whether they are completely empty (Ref. No. 24). Analytical results indicate soil contamination within the tank farm area (Ref. No. 13). The tank farm is surrounded by a concrete block wall and is unlined (Ref. No 24).

A Preliminary Assessment performed by the U.S. Environmental Protection Agency in January 1980 noted the presence of leaking and/or overflowing drums, the location of which was unspecified (Ref. No. 7). An NUS Corp. Region 2 FIT on-site reconnaissance in April 1990 discovered three areas of abandoned drums along the Passaic River, or western portion of the property. The drums were in poor condition; some drums were partially buried. Their contents appeared to be crumbled pieces of tile. The former operator of the property, Congoleum Corporation/Floor Covering Division, manufactured asphalt and/or vinyl tile on site from 1946 to 1974. Solidified sludge from the vinyl tile manufacturing process was found approximately 200 feet south of Drum Area No. 3 (Ref. No. 24).

PART III: PRE-EXISTENT ANALYTICAL DATA

Hart Associates collected four surface soil samples at Franklin Plastics Corp. on June 27, 1984, including one composite sample from the dust collector area and three discrete samples from the tank farm area. Samples were analyzed by Environmental Testing and Certification (ETC); each sample was found to contain very high levels of plasticizers, metals, and coal tar derivatives. Plasticizers, or phthalates, found include: bis(2-ethylhexyl) phthalate, butylbenzyl phthalate, dimethyl phthalate, and di-n-octyl phthalate. Priority Pollutant metals detected include: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc. Certain coal tar derivatives, such as fluoranthene, phenanthrene, pyrene, and cyanide, were also reported at high concentrations in the four samples (Ref. No. 21, Table 1).

To allow Franklin to sell all capital stock to Spartech-Franklin, Inc., before completion of an Enviroment Clean-up Resposibility Act (ECRA) investigation, Franklin Plastics Corp. entered into an Administrative Consent Order (ACO) with the ECRA Enforcement Branch of the New Jersey Department of Environmental Protection (NJDEP) on February 14, 1986 (Ref. Nos. 13, 30). The ACO specified a timetable for completion of all ECRA requirements and provided for financial assurances prior to completion of the transaction. As part of the ECRA investigation, seven monitoring wells

were installed on site; core samples were collected by split spoon at a depth of 6 to 12 inches below ground surface and at a depth of 6 inches above groundwater. Six of the monitoring wells were placed downgradient of possible waste sources. The seventh well, monitoring well No. 1 (MW-1) was intended to provide background or upgradient data. All monitoring well core samples were analyzed for priority pollutants and petroleum hydrocarbons. The groundwater table was found to be perched above a less permeable layer of clayey alluvium (Ref. No. 13, pp. 2, 3).

A total of 33 soil borings were collected on site at varying depths, ranging from 6 to 74 inches. Most samples were analyzed for full priority pollutants, except for areas with compound-specific concerns. For example, the samples collected in the transformer area were analyzed for polychlorinated biphenyls (PCBs) and petroleum hydrocarbons only. Laboratory and field quality assurance/quality control procedures were submitted to the NJDEP with the original documents (Ref. No. 13, p. 2).

Franklin Plastics Corp. is currently in the process of implementing a second phase of sampling that has been required by the NJDEP (Ref. No. 14).

Groundwater Data

On June 24 and 25, 1987, Recon Systems, Inc. collected groundwater samples from the seven on-site monitoring wells. Analytical results of monitoring well sampling are summarized in Table 1. All groundwater samples were analyzed by ERCO Laboratories, Cambridge, Massachusetts. Bis(2-ethylhexyl) phthalate was detected in the field blank and laboratory method blank at 22 parts per billion (ppb) and 65 ppb, respectively. Di-butyl phthalate was detected in the laboratory method blank at 3.8 ppb. Concentrations of petroleum hydrocarbons detected in groundwater range from 0.8 ppm to 7.4 ppm, the highest concentration being detected in the sample collected from monitoring well MW-1. MW-1 was originally intended to serve as an upgradient sample location; however, detection of bis(2-ethylhexyl) phthalate, lead, and petroleum hydrocarbons in the MW-1 sample suggests the possibility that contamination may originate off site or the location may not be truly upgradient of all source areas (Ref. No. 13, p. 18).

Recon Systems, Inc. also collected a sample on September 24, 1987 from Franklin Plastic Corp.'s deep production well. No base neutrals were detected. A library search indicated the presence of four unknown phthalates at concentrations ranging from 0.008 to 0.017 mg/L. Petroleum hydrocarbons were found to be <0.5 mg/L in the sample (Ref. No. 31).

Soil Data

In July 1987, Recon Systems, Inc. collected 33 soil borings as part of ECRA-required sampling. Approximate soil sample locations are shown in Figure 3. Analytical results indicate that the soil

contains elevated levels of heavy metals, and volatile and semivolatile organic compounds. Tables 2and 3 summarize the substances detected in the soil samples. Concentrations of petroleum hydrocarbons found in the soil range from 105 ppm to 20,100 ppm, the highest concentration being detected in both B-8 and MW-4 samples. Soil samples B-1, B-2, and B-3 were analyzed by Accutest Laboratories, North Brunswick, New Jersey. The remaining soil samples were analyzed by ERCO Laboratories, Cambridge, Massachusetts (Ref. Nos. 13, pp. 18 and 22).

PART IV: SITE INSPECTION SAMPLE RESULTS

NUS Corporation Region 2 FIT conducted sampling at the Franklin Plastics Corp. site on June 5, 1990. A total of 16 environmental samples were collected and included three surface water, four sediment, and nine surface soil samples. Table 4 presents a summary of the analytical data. Figure 4 provides a Sample Location Map. Samples were analyzed under the Contract Laboratory Program (CLP) for Target Compound List (TCL) contaminants excluding cyanide. A complete presentation of the analytical results can be found in Reference Number 3.

Surface water and sediment samples were collected to determine whether a release of contaminants attributable to the facility to surface water has occurred. Surface water sample NJEP-SW1 was collected directly from the facility's discharge pipe. Surface water samples NJEP-SW2 and NJEP-SW3 were collected from the sump pit located on the south face of the manufacturing building. Surface soil and sediment samples were collected to determine whether a potential exists for direct contact with contaminants in the soil that are attributable to the facility or whether a potential exists for a release to the air via particulates attributable to the facility. Soil samples were collected at 0 to 6 inches to document these potential routes of contamination.

Sediment samples NJEP-SED3 and NJEP-SED4 were collected from two storm drains bordering Franklin Plastics Corp. on Passaic Avenue to determine whether storm drain contamination attributable to the facility has occurred. Samples NJEP-S1 and NJEP-S3 were soil samples collected in proximity to two seperate drum piles to characterize the material in abandoned drums found on site along the flood area of the Passaic River. Sample NJEP-S2 was a composite waste source sample collected directly from two of approximately 12 drums in Drum Area Number 2. These drums appeared to contain tile-like pieces. Surface soil sample NJEP-S4 was collected near a solidified sludge pile near the Passaic River to characterize the waste source.

Seven monitoring wells are located on site; groundwater samples were not collected due to sufficient data available from previous sampling.

TABLE 1: COMPOUNDS DETECTED IN GROUNDWATER - JUNE 1987

Compounds	MW1	MW2	MW3	MW4	MW5	MW6	MW7
Acenaphthene	---	---	---	BLRL	---	---	---
Aroclor-1242	---	---	15	---	---	---	---
Bis(2-ethylhexyl) phthalate	21	BLRL	20	130	32	BLRL	BLRL
BenzoFluoranthene	BLRL	---	---	---	---	---	---
Chloroethane	---	---	---	---	13	---	---
Chrysene	BLRL	---	---	---	---	---	---
Di-n-butyl phthalate	---	---	---	---	BLRL	---	---
Fluorene	---	---	---	BLRL	---	---	---
2-Methylnaphthalene	BLRL	---	---	---	---	---	---
Naphthalene	BLRL	---	---	---	---	---	---
Pentachlorophenol	---	---	BLRL	BLRL	---	---	---
Arsenic	---	---	---	---	12	---	5.3
Copper	---	---	---	---	360	---	---
Lead	21	13	34	---	83	---	16
Mercury	---	---	0.3	---	---	---	---
Zinc	120	---	---	---	280	---	---

Note:

All data are reported in micrograms per liter (ug/L).
--- - Denotes not detected.
MW - Monitoring Well
BLRL - Detected below laboratory reporting limit.

(Ref. No 13)

TABLE 2: SUMMARY OF ORGANIC COMPOUNDS DETECTED IN SOILS - JULY 1987

Compounds	Sample Location(s) Where Compounds Detected	Sample(s) With Highest Concentration	Highest Concentration (ug/kg)
Acetone	MW3, MW7, B5, B31	MW7	4,000††
Benzene	MW3, MW4, MW5, B9 B11, B31, B32	MW3	130
Benzo Fluoranthene	B31	B31	990
Bis(2-ethylhexyl) phthalate	MW3, MW4, MW5, B1, B2† B3†, B7, B8, B9, B10, B11, B12, B13, B31, B32, B33	B10	26,000,000
Butylbenzyl phthalate	MW3, MW4, B8, B10 B31, B32, B33	MW3	220,000
Di-n-butyl phthalate	B2†, B3†	B3	301,000
1,1-Dichloroethene	MW1, MW3, B5, B11, B31, B32	MW3 B32	140
Di-n-octyl phthalate	MW3, MW4, B2, B3 B8, B9, B10, B13	B8	1,000,000
Fluoranthene	MW5, B9, B10, B31, B32, B33	MW5	29,000
Methylene Chloride	MW1, MW3, MW7, B5†, B31, B32†, B33†	MW7	4,600
N-Nitrosodiphenylamine	B12	B12	10,000
Phenanthrene	MW5, B9, B10, B11, B12 B13, B31, B32, B33	B10	19,000
Tetrachloroethane	MW1	MW1	140
Toluene	MW4, MW5 B8, B9	B8	290
1,1,1-Trichloroethane	MW5, B8, B9	MW5	450
Xylenes	MW4, MW5, B8	MW4	550

Notes:

All data are reported in micrograms per kilogram(ug/kg).
B - Soil boring
MW - Core soil sample collected during installation of monitoring well.
† - Analyte found in method blank.
†† - Detected below laboratory reporting limit.
(Ref. No. 13)

Table 3: INORGANIC SUBSTANCES DETECTED IN SOILS - JULY 1987

Substances	Sample Location(s) Where Substances Detected	Sample(s) With Highest Concentration	Highest Concentration (ug/kg)
Antimony	MW1, MW3, MW4, MW5, MW6 B6, B12, B31, B32, B33	B31	2,350,000
Arsenic	B6, B7	B7	1,300,000
Beryllium	MW6, B6, B32, B33	B32, B33	1,700
Cadmium	MW1, MW3, MW4, MW5, MW6, MW7, B3, B5, B6, B7, B8, B10, B11, B12, B31, B32, B33	B12	563,000
Chromium	B7, B33	B33	145,000
Copper	MW1, MW4, MW7, B10, B33	B33	2,070,000
Lead	MW1, MW4, MW6, MW7, B2 B5,B6, B7, B8, B9, B10, B31, B32, B33	B10	2,150,000
Mercury	B7, B10, B32	B10	4,800
Silver	B7	B7	7,300
Thallium	B5, B8, B12	B5	27,000
Zinc	MW1, MW7, B5, B7, B8, B12, B32, B33	B7	3,020,000

Notes:

All data are reported in micrograms per kilogram (ug/kg).
B - Soil boring
MW - Core soil sample collected during installation of monitoring well.

(Ref. No. 13)

PART V: HAZARD ASSESSMENT

GROUNDWATER ROUTE

1. **Describe the likelihood of a release of contaminant(s) to the groundwater as follows: observed, alleged, potential, or none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminant(s) to the facility.**

Analytical results from groundwater samples collected in June 1987 indicate a potential release of contaminants to the groundwater. Groundwater flow is reportedly westerly toward the Passaic River. Compounds detected in on-site monitoring wells downgradient of potential waste sources include: bis(2-ethylhexyl) phthalate (130 ppb), chloroethane (13 ppb), Aroclor-1242 (15 ppb), arsenic (12 ppb), copper (360 ppb), lead (83 ppb), and zinc (280 ppb). Franklin Plastics Corp. utilizes bis(2-ethylhexyl) phthalate as a plasticizer in its manufacturing process. Bis (2-ethylhexyl) phthalate, arsenic, copper, lead, and zinc were also among compounds detected in soil samples collected in July 1987 by Recon Systems, Inc.

Monitoring Well No. 1 (MW1) was originally intended to provide upgradient data; however, bis(2-ethylhexyl) phthalate, lead, and petroleum hydrocarbons were detected in the MW1 sample, suggesting that MW1 may not be truly upgradient to all waste source areas. Therefore, a release of contaminants to groundwater cannot be definitely concluded. Monitoring Well No. 6, located east of the manufacturing building and north of the stained soil area, may be a truer background or upgradient monitoring well.

Ref. Nos. 13, 24

2. **Describe the aquifer of concern; include information such as depth, thickness, geologic composition, permeability, overlying strata, confining layers, interconnections, discontinuities, depth to water table, groundwater flow direction.**

The aquifer of concern is the Brunswick Formation of the Newark Group which underlies the Newark area, including the City of Kearny. This formation consists of soft, reddish shale and red sandstone. In the vicinity of the site the Brunswick Formation is found at 50 feet below grade. The strata have generally been tilted northwestward, with the ridges trending northeastward. In the Newark area, the total thickness of these Triassic age rocks is estimated to be between 6,000 and 7,000 feet.

Groundwater movement and storage in the Brunswick Formation is primarily due to the extensive fracturing of the rocks of which it is composed. Though the cracks intersect so as to allow freedom of movement in all directions, water may be inhibited in traveling along certain paths by the size and capacity of the fractures.

In the vicinity of the site, the bedrock is found at approximately 50 feet below ground surface and is overlain by an estimated 30 feet of sand/silt, 10 feet of dense sand and gravel, and 5 feet of clayey silt, topped by 5 feet of urban fill. Sand and gravel are the most permeable of these geologic materials; the permeability associated with this soil type is 10^{-3} to 10^{-5} cm/sec. The water table is estimated to be at approximately 5 feet. Due to the close proximity of the Passaic River, which is tidal for its last 17 miles from Dundee Dam to Newark Bay, the possibility of salt water intrusion is increased. Groundwater flow is believed to be in a westerly direction toward the Passaic River.

Ref. Nos. 9, 12, 20, 21, 22, 33, 34

3. **Is a designated sole source aquifer within 3 miles of the site?**

Franklin Plastics Corp. is located in Kearny, Hudson County, New Jersey. There are no designated sole source aquifers within 3 miles of the site. The nearest sole source aquifer is the Buried Valley Aquifer System which is located more than 3 miles from the site.

Ref. Nos. 10, 11, 15

4. **What is the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern?**

The depth to the water table on site ranges between 3 and 8 feet. This water level may be tidally influenced due to its proximity to a tidal portion of the Passaic River. Based on analytical results of soil samples collected in July 1987 by Recon Systems, Inc., the lowest known point of waste disposal is at 6 feet, 2 inches below ground surface. Petroleum hydrocarbons were detected at a concentration of 123 ppm in a boring collected at this depth east of the facility's boiler room. Analytical data also indicate the presence of contaminants at 6 inches above groundwater at various sampling locations; therefore the difference between depth of waste disposal and the depth to water table is less than 6 inches.

Ref. Nos. 2, 4, 9, 13, 15

5. **What is the permeability value of the least permeable continuous intervening stratum between the ground surface and the aquifer of concern?**

Water table conditions exist in the layer of urban fill, which is approximately 5 feet below grade. The permeability associated with these deposits is 10^{-3} to 10^{-5} cm/sec.

Ref. Nos. 9, 12, 33, 34

6. **What is the net precipitation for the area?**

Normal annual precipitation for the area is approximately 44 inches. The mean annual lake evaporation for the area is 32 inches. Therefore, the net precipitation for the area is estimated to be 12 inches.

Ref. No. 12

7. **Identify uses of groundwater within 3 miles of the site (i.e., private drinking source, municipal source, commercial, industrial, irrigation, unusable).**

Groundwater within a 3-mile radius of the site is not used as a drinking water source. Portions of the Towns of Belleville, Bloomfield, East Orange, Harrison, Newark, and North Arlington are included within the 3-mile vicinity of Franklin Plastics Corporation in Kearny, New Jersey. All of these towns are served by the Wanaque Reservoir in Passaic County, New Jersey.

Kearny does not authorize drinking water wells; however, industrial wells are present and are permitted by the New Jersey Department of Environmental Protection (NJDEP). The NJDEP monitors these wells. Cross-connections prevent the industrial well water from entering the Kearny drinking water supply system.

Ref. Nos. 15, 16, 17, 18

8. **What is the distance to and depth of the nearest well that is currently used for drinking or irrigation purposes?**

Groundwater is not used for potable or irrigational purposes within a 3-mile radius of the site.

Ref. Nos. 15, 16, 17, 18

9. **Identify the population served by the aquifer of concern within a 3-mile radius of the site.**

No one is served by the aquifer of concern within a 3-mile radius of the site. The site is located in Kearny, New Jersey, which receives its potable water from the Wanaque Reservoir located in Passaic County, New Jersey

Ref. Nos. 10, 15, 16, 17

SURFACE WATER ROUTE

10. **Describe the likelihood of a release of contaminant(s) to surface water as follows: observed, alleged, potential, or none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminants to the facility.**

There is potential for a release of contaminants from the site to surface water. Franklin Plastics Corp. retains a New Jersey Pollutant Discharge Elimination System (NJPDES) Permit for one thermal noncontact cooling water discharge into the Passaic River. The facility's open sump pit collects noncontact cooling water from the mixer jacket and roller mills, overflow from the cooling tower, and drainage from indoor trenches. The sump pit is connected to the outfall pipe discharging into the Passaic River.

Analysis of samples obtained by NUS Corp. Region 2 FIT on June 5, 1990 indicated the presence of fluoranthene (27,000 ug/kg), pyrene (25,000 ug/kg), butylbenzyl phthalate (estimated-470,000 ug/kg), bis(2-ethylhexyl) phthalate (13,000,000 ug/kg), chrysene (17,000 ug/kg), and di-n-octyl phthalate (800,000 ug/kg) in sediment sample number NJEP-SED2 collected from the facility's sump pit. These compounds were not detected in surface water samples NJEP-SWI, -SW2, and -SW3. Surface water sample NJEP-SW1 was collected directly from the facility's discharge pipe while NJEP-SW2 and -SW3 were collected from the sump pit.

Metals that may be of concern that were detected in sample numbers NJEP-SW1, -SW2, and -SW3 include: cadmuim (12.2 ug/L), copper (28.8 ug/L), lead (3.4 ug/L), manganese (23.9 ug/L), and zinc (22.5 ug/L). Values stated are for concentrations of contaminant at the discharge point. **These metals were also detected in the sediment sample collected from the sump pit at estimated concentrations of: cadmium (202 mg/kg), copper (3,280 mg/kg), lead (818 mg/kg),** manganese (3,980 mg/kg), and zinc (759 mg/kg). This suggests a possible release of these contaminants to the Passaic River via the discharge outfall; however, since the chemical constituents of the noncontact cooling water prior to entering the manufacturing plant are unknown, a release cannot be postively concluded.

A portion of the property is occasionally flooded by high tides from the Passaic River. An NUS Corp. Region 2 FIT on-site reconnaissance performed on April 30, 1990 noted the presence of a solidified sludge pile and abandoned drums containing tile-like pieces along the tidal portion of the property. There is a potential for any contaminants present in these areas to be released directly to surface water during high tides. Analytical results from samples collected from the sludge pile and three drum areas on June 5, 1990 indicate the presence of di-n-butyl phthalate (31,000 ug/kg), butylbenzyl phthalate (16,000,000 ug/kg), and bis (2-ethylhexyl) phthalate (110,000 ug/kg).

Ref. Nos. 3, 20, 23, 24

11. **Identify and locate the nearest downslope surface water. If possible, include a description of possible surface drainage patterns from the site.**

The Passaic River is the nearest downslope surface water; it is located approximately 400 feet west of Franklin's manufacturing building and forms the western border of the site. During an NUS Corp. Region 2 FIT on-site reconnaissance performed on April 30, 1990, no obvious drainage patterns were observed; however, drums and the sludge pile are located approximately 30 to 60 feet from the Passaic River in an area that is occasionally flooded.

Ref. Nos. 15; 24, p 12

12. **What is the facility slope in percent? (Facility slope is measured from the highest point of deposited hazardous waste to the most downhill point of the waste area or to where contamination is detected.)**

The facility slope is estimated to be less than 3 percent.

Ref. Nos. 15, 24

13. **What is the slope of the intervening terrain in percent? (Intervening terrain slope is measured from the most downhill point of the waste area to the probable point of entry to surface water.)**

The intervening terrain average slope is estimated to be less than 3 percent.

Ref. Nos. 15, 24

14. **What is the 1-year 24-hour rainfall?**

The 1-year 24-hour rainfall in the area of the site is 3 inches.

Ref. No. 12

15. **What is the distance to the nearest downslope surface water? Measure the distance along a course that runoff can be expected to follow.**

The Passaic River is the nearest downslope surface water, which is approximately 30 feet from the nearest waste source area, the abandoned drums. Occasionally during high tides, the drum areas are flooded. The sludge pile is approximately 50 feet from the Passaic river, also in the area that is occassionally flooded. Both the drum areas and sludge pile have no containment structures.

Ref. Nos. 15; 24, p. 12

16. **Identify uses of surface waters within 3 miles downstream of the site (i.e., drinking, irrigation, recreation, commercial, industrial, not used).**

Surface waters within 3 miles downstream of the site are designated for secondary recreational purposes, maintenance and migration of fish populations, migration of diadromous fish, and maintenance of wildlife.

Ref. Nos. 15, 19

17. **Describe any wetlands, greater than 5 acres in area, within 2 miles downstream of the site. Include whether it is a freshwater or coastal wetland.**

There are no wetlands greater than 5 acres in area within 2 miles downstream of the site.

Ref. Nos. 15, 26

18. **Describe any critical habitats of federally listed endangered species within 2 miles of the site along the migration path.**

Except for occasional transient species, such as the peregrine falcon (Falco peregrinus), no federally listed endangered species are known to exist within 2 miles of the site along the migration path.

Ref. Nos. 15, 27

19. **What is the distance to the nearest sensitive environment along or contiguous to the migration path (if any exist within 2 miles)?**

There are no wetlands or critical habitats of federally listed endangered species along or contiguous to the migration path

Ref. Nos. 15, 26, 27

20. **Identify the population served or acres of food crops irrigated by surface water intakes within 3 miles downstream of the site and the distance to the intake(s).**

The site is located in a mixed industrial/residential section of Kearny, New Jersey. The Passaic River is the nearest surface water body and forms the western border of the site. The Passaic River is not used for potable or irrigational purposes within 3 miles downstream of the probable point of entry.

Ref. Nos. 15, 18, 19, 24

21. **What is the state water quality classification of the water body of concern?**

The state water quality classification of the Newark portion of the Passaic River is SE3. This classification indicates that its designated uses are: secondary contact recreation, maintenance and migration of fish populations, migration of diadromous fish, maintenance of wildlife, and any other reasonable uses.

In Franklin Plastics Corp's New Jersey Pollutant Discharge Elimination System (NJPDES) Permit, this portion of the Passaic River is classified as TW-3, which designates the waters as used primarily for navigational, not recreational, purposes.

Ref. Nos. 19, 20, 23

22. **Describe any apparent biota contamination that is attributable to the site.**

A Preliminary Assessment performed by Hart Associates in June 1984 identified an area of stressed vegetation near the air pollution control units. An area devoid of vegetation also exists near the facility's east bay door on Passaic Avenue.

Ref. Nos. 21, 24

AIR ROUTE

23. **Describe the likelihood of a release of contaminant(s) to the air as follows: observed, alleged, potential, none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminant(s) to the facility.**

Based on analytical results from surface soil samples collected during the NUS FIT 2 site inspection on June 5, 1990, there is a potential for release of airborne particulates from the site. These samples were collected at depths of 0-6 inches below ground surface. The compounds detected are known to be major ingredients in the facility's manufacturing process. High concentrations of di-n-butyl phthalate (31,000 ug/kg), butylbenzyl phthalate (16,000,000 ug/kg), bis(2-ethylhexyl) phthalate (1,600,000 ug/kg), and di-n-octyl phthalate (78,000 ug/kg) were detected in these surface soil samples.

Ref. No. 3

24. **What is the population within a 4-mile radius of the site?**

Approximately 569,000 people reside within a 4-mile radius of the site.

Ref. No. 28

FIRE AND EXPLOSION

25. Describe the potential for a fire or explosion to occur with respect to the hazardous substance(s) known or suspected to be present on site. Identify the hazardous substance(s) and the method of storage or containment associated with each.

There is little potential for a fire or explosion to occur with respect to the known hazardous substances on site. The phthalates detected on site are not highly flammable.

Ref. No. 13

26. What is the population within a 2-mile radius of the hazardous substance(s) at the facility?

Approximately 196,200 people reside within a 2-mile radius of the hazardous substance(s) at the facility.

Ref. No. 28

DIRECT CONTACT/ON-SITE EXPOSURE

27. Describe the potential for direct contact with hazardous substance(s) stored in any of the waste units on site or deposited in on-site soils. Identify the hazardous substance(s) and the accessibility of the waste unit.

There is potential for direct contact with hazardous substances that remain on site. Franklin Plastic Corp.'s premises occupy approximately 8 acres between the Passaic River and Passaic Avenue. The property is fenced from its gate entrance to its boundary on the Passaic River; however, an NUS Corp. Region 2 FIT on-site reconnaissance of April 30, 1990 observed soil run-off from a stained soil area east of the manufacturing building. The stained soil area is located along Passiac Avenue. The surface run-off pattern was observed to extend from the stained soil area, across an obvious public access area, to Passaic Avenue and two storm drains. Surface soil samples were collected by NUS Corp. Region 2 FIT on June 5, 1990 from the stained soil area, from the run-off pathway outside the fence, and from two storm drains on Passaic Ave. Butylbenzyl phthalate (170,000 ug/kg) and bis(2-ethylhexyl) phthalate (1,600,000 ug/kg) were detected in the surface soil sample collected from the stained soil area. These same two contaminants were detected in the sample collected in the run-off pathway (19,000 ug/kg and 240,000 ug/kg, respectively) and in the samples collected from the storm drains.

Franklin Plastics Corp. is an active facility. The detection of high concentrations of phthalates in surface soil samples indicates that there is the potential for direct contact by on-site workers. There is also a potential for soil contamination on adjacent properties.

Ref. Nos. 3, 7, 24

28. How many residents live on a property whose boundaries encompass any part of an area contaminated by the site?

Franklin Plastics Corp. is located in an industrial/commercial portion of Kearny, New Jersey. No residents live on a property whose boundaries encompass any part of areas known to be contaminated by the site.

Ref. No. 24

29. What is the population within a 1-mile radius of the site?

Approximately 63,500 people reside within a 1-mile radius of the site.

Ref. No. 28

PART VI: ACTUAL HAZARDOUS CONDITIONS

Analyses of soil samples collected from the Franklin Plastics Corp. site indicate above-background contamination that is attributable to the facility (Ref. No. 3). Franklin Plastics Corp. utilizes phthalates such as bis(2-ethylhexyl) phthalate, butylbenzyl phthalate, di-n-butyl phthalate, and di-n-octyl phthalate as plasticizers in its manufacturing processes. High concentrations of these four phthalates were detected in soil samples collected by Recon Systems, Inc. in July 1987 and in samples collected during the June 5, 1990 NUS Corp. Region 2 FIT site inspection (Ref. Nos. 3, 13). Tables 2 and 3 summarize the compounds detected during the July 1987 sampling event. Table 4 summarizes compounds detected during the June 1990 sampling event.

There is evidence suggesting a release of a substance of concern from the facility to the groundwater. Table 1 presents the organic and inorganic compounds detected in groundwater from the sampling analyses report submitted by Recon Systems, Inc. in October 1987. Bis (2-ethylhexyl) phthalate was detected in all groundwater samples; the highest concentration being 130 ug/L detected in Monitoring Well No. 4. Bis(2-ethylhexyl) phthalate was also detected in the trip blank and the laboratory method blank; therefore, a release of this compound cannot be definitely concluded. Di-n-butyl phthalate was present in Monitoring Well No. 5 at a concentration of 2.1 ug/L. Groundwater is not used for potable or irrigational purposes within a 3-mile radius of the site (Ref. No. 13).

A Preliminary Assessment performed by Hart Associates in September 1984 noted an area of stressed vegetation east of the manufacturing building (Ref. No.21). An NUS Corp. Region 2 FIT on-site reconnaissance on April 30, 1990 also observed this area of stressed vegetation in addition to another area of stressed vegetation west of the facility's air pollution control unit (Ref. No. 24). A surface soil sample collected on June 5, 1990 from the area near the air pollution control unit indicated elevated levels of butylbenzyl phthalate, bis(2-ethylhexyl) phthalate, and di-n-octyl phthalate (Ref. No. 3).

There is documented contamination of a storm drain. Sediment samples collected on June 5, 1990 from two storm drains on Passaic Ave. adjacent to Franklin Plastics Corp. indicate the presence of elevated levels of butylbenzyl phthalate, bis(2-ethylhexyl)phthalate, and di-n-octyl phthalate. Phthalates are utilized as plasticizers in the facility's manufacturing process. Surface soil samples collected from the stained soil on the east side of the manufacturing building (NJEP-S7) and from the surface run-off (NJEP-S8 and -S9) also indicate the presence of butylbenzyl phthalate and bis (2-ethylhexyl) phthalate. In all likelihood, surface soil from Franklin Plastics Corp. leaves the site via the observed run-off pathway and ultimately enters the two adjacent storm drains on Passaic Avenue.

Three abandoned drum areas and an area near a solidified sludge pile along the Passaic River were sampled on June 5, 1990; this area is occasionally flooded by high tides (Ref. No. 24, p. 12). Di-n-butyl phthalate, butylbenzyl phthalate, and bis(2-ethylhexyl) phthalate were detected at elevated levels in these samples (Ref. No. 3).

A condenser blowdown drainage pathway was observed running parallel to the southwest corner of the manufacturing building and the tank farm. Analytical results from samples collected from the drainage pathway by NUS Corp. Region 2 FIT in June 1990 indicate elevated levels of butylbenzyl phthalate and bis(2-ethylhexyl) phthalate.

No other actual hazardous conditions pertaining to human or environmental contamination have been documented. Specifically:

- Contamination has not been documented either in organisms in a food chain leading to humans or in organisms directly consumed by humans.
- There have been no documented observed incidents of direct physical contact with hazardous substances at the facility involving a human being (not including occupational exposure) or a domestic animal.
- There have been no documented incidents of damage to fauna (e.g., fish kill) that can be attributed to the hazardous material at the facility.
- A fire marshall has not indicated that the facility presents a significant threat, nor is there a demonstrated threat based on field observation.

PART VII: SITE SUMMARY AND RECOMMENDATIONS

Franklin Plastics Corp. (Franklin), is located along the Passaic River in Kearny, New Jersey. In February 1986, an Administrative Consent Order from the New Jersey Department of Environmental Protection (NJDEP) allowed the transfer of company stock to Spartech-Franklin, Inc. prior to the completion of an Environmental Clean-up Responsibility Act (ECRA) study. Franklin Plastics Corp. is a compounder of polyvinyl chloride (PVC) pellets. The site occupies approximately 8 acres in a mixed industrial/commercial portion of Kearny; 1 acre of the property is leased to Franklin. The site is bounded on the west by the Passaic River, to the east by Passaic Avenue, and the north and south by industrial/commercial businesses. The property is fenced where it is not bordered by the Passaic River. Approximately 1,300 people reside within 0.25 mile of the site.

Franklin has been a privately owned, active manufacturing facility under this name from 1976 to the present. Congoleum Corporation/Floor Covering Division owned the property from 1946 to 1974; Congoleum manufactured asphalt and/or vinyl tile on the premises. Franklin receives plastic resin as a solid or powder, then adds pigment and varying amounts of plasticizer to the customer's specifications. The final product is PVC pellets, which are sold to individual customers for conversion into end products. A dust collector and a combined ventilation/exhaust system operate continuously. The free dust is removed to outdoor bins and is recycled back into the process.

In August 1985, NJDEP issued Franklin a New Jersey Pollutant Discharge Elimination System (NJPDES) permit for one surface water discharge of noncontact cooling water. Overflow from the cooling tower, cooling water from the mixer jacket and roller mills, and drainage from indoor trenches are collected in a concrete-lined open sump pit along the south wall of the manufacturing building. The sump pit is divided into two sections; the first section is for settling while the second section discharges to the Passaic River under NJPDES Permit No. NJ0002194. The sump pit is reported to be cleaned annually. In September 1985, NJDEP, Division of Water Resources inspected Franklin and found samples of the facility's effluent to exceed permit limitations for temperature, chromium, and zinc. In September 1989, NJDEP cited Franklin in a Discharge Surveillance Report for failure to report maximum values on its Discharge Monitoring Reports for the period May 1, 1988 to April 30, 1989.

In 1987, Franklin underwent groundwater and soil sampling required under the ECRA. Franklin's sampling results reported by Recon Systems, Inc. indicated the widespread presence of phthalates, polynuclear aromatic hydrocarbons (PAHs), and metals such as lead and cadmium. Throughout the fill, coal cinders and ash were found; these materials are indicated as a possible source for the detected PAHs. Phthalates were most often detected in areas associated with storage and loading of plasticizer oils and in areas in which fugitive dust is likely to settle. Phthalates detected above ECRA Cleanup Guidelines include: bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, di-n-octyl phthalate, and butylbenzyl phthalate. Metals present in soil and/or groundwater include: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, silver, thallium, and zinc.

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA

VOLATILES												
Sample ID No.	NJEP-SW1(MS/MSD)	NJEP-SW2	NJEP-SW3(DUP)	NJEP-SED1	NJEP-SED2	NJEP-SED3	NJEP-SED4	NJEP-S1	NJEP-S2	NJEP-S3	NJEP-S4
Traffic Report No.	BDP54	BDP55	BDP56	BDP57	BDP58	BDP59	BDP60	BDP61	BDP62	BDP63	BDP64
Matrix	WATER	WATER	WATER	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL
Units	ug/L	ug/L	ug/L	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor	1	1	1	1	1	1	1	1	1	1	1
Percent Moisture	--	--	--	33	58	19	28	9	8	27	7
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride	J										
Acetone	J										
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
Trans-1,2-Dichloroethene (total)											
Chloroform	14	14	13								
1,2-Dichloroethane											
2-Butanone				29 E							
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane	J	J	J								
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
Bromoform											
4-Methyl-2-Pentanone				30							
2-Hexanone											
Tetrachloroethene											
Toluene											
1,1,2,2-Tetrachloroethane											
Chlorobenzene											
Ethylbenzene					J						
Styrene											
Xylenes (Total)					36						

NOTES:
Blank space - compound analyzed for but not detected
B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
E - estimated value
J - estimated value, compound present below CRQL but above IDL
R - analysis did not pass EPA QA/QC
N - Presumptive evidence of the presence of the material
NR - analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

VOLATILES											
Sample ID No.	NJEP-S5	NJEP-S6(MS/MSD)	NJEP-S7	NJEP-S8	NJEP-S9(DUP)	NJEP-RIN1	NJEP-RIN2	NJEP-RIN3	NJEP-RIN4	NJEP-RIN5	NJEP-TBLK1
Traffic Report No.	BDP65	BDP66	BDP67	BDP68	BDP69	BDP70	BDP71	BDP72	BDP73	BDP75	BDP74
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Dilution Factor	1	1	1	1	1	1	1	1	1	1	1
Percent Moisture	7	20	20	9	6	--	--	--	--	--	--
Chloromethane						J	J		J	J	
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride										J	
Acetone		J									
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
Trans-1,2-Dichloroethene (total)											
Chloroform						J	J	J	J	J	J
1,2-Dichloroethane											
2-Butanone											
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
Bromoform											
4-Methyl-2-Pentanone											
2-Hexanone											
Tetrachloroethene											
Toluene								J			
1,1,2,2-Tetrachloroethane											
Chlorobenzene											
Ethylbenzene											
Styrene											
Xylenes (Total)											

NOTES:
Blank space - compound analyzed for but not detected
B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
E - estimated value
J - estimated value, compound present below CRQL but above IDL
R - analysis did not pass EPA QA/QC
N - Presumptive evidence of the presence of the material
NR - analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

SEMI-VOLATILES												
Sample ID No.	NJEP-SW1(MS/MSD)	NJEP-SW2	NJEP-SW3(DUP)	NJEP-SED1	NJEP-SED2	NJEP-SED3	NJEP-SED4	NJEP-S1	NJEP-S2	NJEP-S3	NJEP-S4
Traffic Report No.	BDP54	BDP55	BDP56	BDP57	BDP58	BDP59	BDP60	BDP61	BDP62	BDP63	BDP64
Matrix	WATER	WATER	WATER	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL
Units	ug/L	ug/L	ug/L	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor/GPC Cleanup (Y)	1	1	1	1(MED)	13	7.2	7.2	1	1(MED)	1(MED)	10(MED)
Percent Moisture	--	--	--	33	58	19	28	9	8	27	7
Phenol											
bis(2-Chloroethyl)ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
bis(2-Chloroisopropyl)ether											
4-Methylphenol											
N-Nitroso-di-n-dipropylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic acid									R	R	
bis(2-Chloroethoxy)methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene						J	J				
4-Chloroaniline											
Hexachlorobutadiene											
4-Chloro-3-Methylphenol											
2-Methylnaphthalene						J	J				
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichloropnenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate						J					
Acenaphthylene											
2,6-Dinitrotoluene											
3-Nitroaniline											
Acenaphthene						J	J				
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran						J					
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenyl ether											
Fluorene					J	J	J				
4-Nitroaniline											
4,6-Dinitro-2-methylphenol											
N-nitrosodiphenylamine											
4-Bromophenyl-phenyl ether											
Hexachlorobenzene											

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

SEMI-VOLATILES											
Sample ID No.	NJEP-S5	NJEP-S6(MS/MSD)	NJEP-S7	NJEP-S8	NJEP-S9(DUP)	NJEP-RIN1	NJEP-RIN2	NJEP-RIN3	NJEP-RIN4	NJEP-RIN5	NJEP TBLK1
Traffic Report No.	BDP65	BDP66	BDP67	BDP68	BDP69	BDP70	BDP71	BDP72	BDP73	BDP75	BDP74
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	10(MED)	7.8	3(MED)	1	1	1	1	1	1	1	N/A
Percent Moisture	7	20	20	9	6	--	--	--	--	--	N/A
Phenol											NR
bis(2-Chloroethyl)ether											NR
2-Chlorophenol											NR
1,3-Dichlorobenzene											NR
1,4-Dichlorobenzene											NR
Benzyl alcohol											NR
1,2-Dichlorobenzene											NR
2-Methylphenol											NR
bis(2-Chloroisopropyl)ether											NR
4-Methylphenol											NR
N-Nitroso-di-n-dipropylamine											NR
Hexachloroethane											NR
Nitrobenzene											NR
Isophorone											NR
2-Nitrophenol											NR
2,4-Dimethylphenol											NR
Benzoic acid											NR
bis(2-Chloroethoxy)methane											NR
2,4-Dichlorophenol											NR
1,2,4-Trichlorobenzene											NR
Naphthalene		J		560	J						NR
4-Chloroaniline											
Hexachlorobutadiene											NR
4-Chloro-3-Methylphenol											NR
2-Methylnaphthalene				J	J						NR
Hexachlorocyclopentadiene											NR
2,4,6-Trichlorophenol											NR
2,4,5-Trichlorophenol											NR
2-Chloronaphthalene											NR
2-Nitroaniline											NR
Dimethylphthalate											NR
Acenaphthylene				J							NR
2,6-Dinitrotoluene											NR
3-Nitroaniline											NR
Acenaphthene		J		520	J						NR
2,4-Dinitrophenol											NR
4-Nitrophenol											NR
Dibenzofuran		J		430	J						NR
2,4-Dinitrotoluene											NR
Diethylphthalate											NR
4-Chlorophenyl-phenyl ether											NR
Fluorene		J		530	J						NR
4-Nitroaniline											NR
4,6-Dinitro-2-methylphenol											NR
N-nitrosodiphenylamine											NR
4-Bromophenyl-phenyl ether											NR
Hexachlorobenzene											NR

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

SEMI-VOLATILES

Sample ID No.	NJEP-SW1(MS/MSD)	NJEP-SW2	NJEP-SW3(DUP)	NJEP-SED1	NJEP-SED2	NJEP-SED3	NJEP-SED4	NJEP-S1	NJEP-S2	NJEP-S3	NJEP-S4
Traffic Report No.	BDP54	BDP55	BDP56	BDP57	BDP58	BDP59	BDP60	BDP61	BDP62	BDP63	BDP64
Matrix	WATER	WATER	WATER	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL
Units	ug/L	ug/L	ug/L	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor/GPC Cleanup (Y)	1	1	1	1(MED)	13	7.2	7.2	1	1(MED)	1(MED)	10(MED)
Percent Moisture	--	--	--	33	58	19	23	9	8	27	7
Pentachlorophenol											
Phenanthrene				J	J	15000	4400	J			
Anthracene					J	2900	J	J			
Di-n-butylphthalate					J	J	J	500	31000	J	J
Fluoranthene				J	27000	19000	5600	J			
Pyrene				J	25000	18000	7000	J			
Butylbenzylphthalate				38000	470000 E	370000	71Q000	28000	11000000	10000	16000000
3,3'-Dichlorobenzidine											
Benzo(a)anthracene				J	J	8000	J	J			
Chrysene				J	17000	13000	3500	J			
bis(2-Ethylhexyl)phthalate				190000	13000000	1500000	1000000	1700	110000	J	J
Di-n-octylphthalate				J	800000	37000	48000	J			
Benzo(b)fluoranthene				JN	16000 EN	9500	4000 EN	JN			
Benzo(k)fluoranthene						8300 E					
Benzo(a)pyrene				J	J	7500	J	J			
Indeno(1,2,3-cd)pyrene				J	J	4000	J	J			
Dibenz(a,h)anthracene					J	J	J				
Benzo(g,h,i)perylene				J	J	3600	J	J			

NOTES:
- Blank space - compound analyzed for but not detected
- B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
- E - estimated value
- J - estimated value, compound present below CRQL but above IDL
- R - analysis did not pass EPA QA/QC
- N - Presumptive evidence of the presence of the material
- NR - analysis not required

Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

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SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

SEMI-VOLATILES											
Sample ID No.	NJEP-S5	NJEP-S6(MS/MSD)	NJEP-S7	NJEP-S8	NJEP-S9(DUP)	NJEP-RIN1	NJEP-RIN2	NJEP-RIN3	NJEP-RIN4	NJEP-RIN5	NJEP-TBLK1
Traffic Report No.	BDP65	BDP66	BDP67	BDP68	BDP69	BDP70	BDP71	BDP72	BDP73	BDP75	BDP74
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	10(MED)	7.8	3(MED)	1	1	1	1	1	1	1	N/A
Percent Moisture	7	20	20	9	6	--	--	--	--	--	N/A
Pentachlorophenol											NR
Phenanthrene		5000		4600	1300						NR
Anthracene		J		810	J						NR
Di-n-butylphthalate		J		J	J						NR
Fluoranthene		6000	J	4900	1900						NR
Pyrene		4700	J	3500	1400						NR
Butylbenzylphthalate	J	690000	170000	19000	14000						NR
3,3'-Dichlorobenzidine											NR
Benzo(a)anthracene		J		2000	830						NR
Chrysene		J	J	2600	1200						NR
bis(2-Ethylhexyl)phthalate	J	840000	1800000	240000	190000						NR
Di-n-octylphthalate		78000	J	3600	4100						NR
Benzo(b)fluoranthene		5100 EN	JN	3600 EN	1600 EN						NR
Benzo(k)fluoranthene											NR
Benzo(a)pyrene		J		1500	610						NR
Indeno(1,2,3-cd)pyrene		J		960	450						NR
Dibenz(a,h)anthracene		J		440	J						NR
Benzo(g,h,i)perylene		J		870	380						NR

NOTES:
Blank space - compound analyzed for but not detected
B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
E - estimated value
J - estimated value, compound present below CRQL but above IDL
R - analysis did not pass EPA QA/QC
N - Presumptive evidence of the presence of the material
NR - analysis not required
Detection limits elevated if dilution Factor >1 and/or percent moisture >0%

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

PESTICIDES											
Sample ID No.	NJEP-SW1(MS/MSD)	NJEP-SW2	NJEP-SW3(DUP)	NJEP-SED1	NJEP-SED2	NJEP-SED3	NJEP-SED4	NJEP-S1	NJEP-S2	NJEP-S3	NJEP-S4
Traffic Report No.	BDP54	BDP55	BDP56	BDP57	BDP58	BDP59	BDP60	BDP61	BDP62	BDP63	BDP64
Matrix	WATER	WATER	WATER	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL
Units	ug/L	ug/L	ug/L	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor/GPC Cleanup (Y)	1	1	1	1(MED)	20	50	100	5	1(MED)	1(MED)	50(MED)
Percent Moisture	--	--	--	33	58	19	28	9	8	27	7
alpha-BHC											
beta-BHC											
delta-BHC											
gamma-BHC (Lindane)											
Heptachlor											
Aldrin											
Heptachlor epoxide											
Endosulfan I											
Dieldrin											
4,4'-DDE											
Endrin											
Endosulfan II											
4,4'-DDD											
Endosulfan sulfate											
4,4'-DDT											
Methoxychlor											
Endrin ketone											
alpha-Chlordane											
gamma-Chlordane											
Toxaphene											
Aroclor-1016											
Aroclor-1221											
Aroclor-1232											
Aroclor-1242											
Aroclor-1248											
Aroclor-1254											
Aroclor-1260											

NOTES:
Blank space - compound analyzed for but not detected
B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
E - estimated value
J - estimated value, compound present below CRQL but above IDL
R - analysis did not pass EPA QA/QC
N - Presumptive evidence of the presence of the material
NR - analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14264 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

PESTICIDES	NJEP-S5	NJEP-S6(MS/MSD)	NJEP-S7	NJEP-S8	NJEP-S9(DUP)	NJEP-RIN1	NJEP-RIN2	NJEP-RIN3	NJEP-RIN4	NJEP-RIN5	NJEP-TBLK1
Sample ID No.	BDP65	BDP66	BDP67	BDP68	BDP69	BDP70	BDP71	BDP72	BDP73	BDP75	BDP74
Traffic Report No.	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER	WATER
Matrix	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Units	100(MED)	200	1(MED)	5	5	1	1	1	1	1	N/A
Dilution Factor,GPC Cleanup (Y)	7	20	20	9	6	--	--	--	--	--	N/A
Percent Moisture											
alpha-BHC											NR
beta-BHC											NR
delta-BHC											NR
gamma-BHC (Lindane)											NR
Heptachlor											NR
Aldrin											NR
Heptachlor epoxide											NR
Endosulfan I											NR
Dieldrin											NR
4,4'-DDE											NR
Endrin											NR
Endosulfan II											NR
4,4'-DDD											NR
Endosulfan sulfate											NR
4,4'-DDT											NR
Methoxychlor											NR
Endrin ketone											NR
alpha-Chlordane											NR
gamma-Chlordane											NR
Toxaphene											NR
Aroclor-1016											NR
Aroclor-1221											NR
Aroclor-1232											NR
Aroclor-1242											NR
Aroclor-1248											NR
Aroclor-1254											NR
Aroclor-1260											NR

NOTES:
Blank space - compound analyzed for but not detected
B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
E - estimated value
J - estimated value, compound present below CRQL but above IDL
R - analysis did not pass EPA QA/QC
N - Presumptive evidence of the presence of the material
NR - analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204
LAB NAME: VEGAS ANALYTICAL

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

INORGANICS Sample ID No. Traffic Report No. Matrix Units	NJEP-SW1(MS/MSD) MBCN75 WATER ug/L	NJEP-SW2 MBCN76 WATER ug/L	NJEP-SW3(DUP) MBCN77 WATER ug/L	NJEP-SED1 MBCN78 SEDIMENT mg/kg	NJEP-SED2 MBCN79 SEDIMENT mg/kg	NJEP-SED3 MBCN80 SEDIMENT mg/kg	NJEP-SED4 MBCN81 SEDIMENT mg/kg	NJEP-S1 MBCN82 SOIL mg/kg	NJEP-S2 MBCN83 SOIL mg/kg	NJEP-S3 MBCN84 SOIL mg/kg	NJEP-S4 MBCN85 SOIL mg/kg
Aluminum				3610	4040 E	5180	4640	9690	624	5970	1150
Antimony				27.2 E	49 E	J	J				J
Arsenic	J	J		J	68 E	8	26.7 E	12.5	J	3.2	J
Barium	J	J	J	338	1010 E	143	130	108	133	358	59.3
Beryllium					17.5 E						
Cadmium	12.2	12	13.1	29.2	202 E	5	5.7	1.8	29.2	2.5	2.9
Calcium	15500	15100	15000	9090	22600 E	14200	20500	4080	201000	59500	187000
Chromium				79.1	55.6 E	71.3	48.9	41.3	76.5	51.2	44
Cobalt			J	J	J	J	J	27.3	J	J	J
Copper	28.8	38.7	41.9	327	3280 E	227	103	162	23.5	81.8	21.8
Iron	171	176	175	9060	217000 E	41000	17400	140000	15200	15000	5080
Lead	3.4	4.4 E	18.7 E	280	818 E	596	644 E	70	299	191	133
Magnesium	J	J	J	2350	4890 E	6190	6430	6320	15100	9910	32500
Manganese	23.9	29.2	25	76.8	3980 E	273	160	798	158	244	85.6
Mercury				0.31	0.25 E	0.44	0.33	0.17	0.16	0.25	0.1
Nickel				36 E	39.8 E	38.9 E	33.6 E	58.7	45.7	92.5	40.5
Potassium	J	J	J	J	J	J	J	3090	J	J	J
Selenium					5.1 E	J	J				
Silver						J			36.7		
Sodium	9670	9490	9510	R	R	R	R	R	R	R	R
Thallium											
Vanadium				30.9	2800 E	33.7 E	30.6 E	36.4 E	21.7	97.9 E	J
Zinc	22.5	24.2	35	747	759 E	731	313	133	78.8	185	96.9

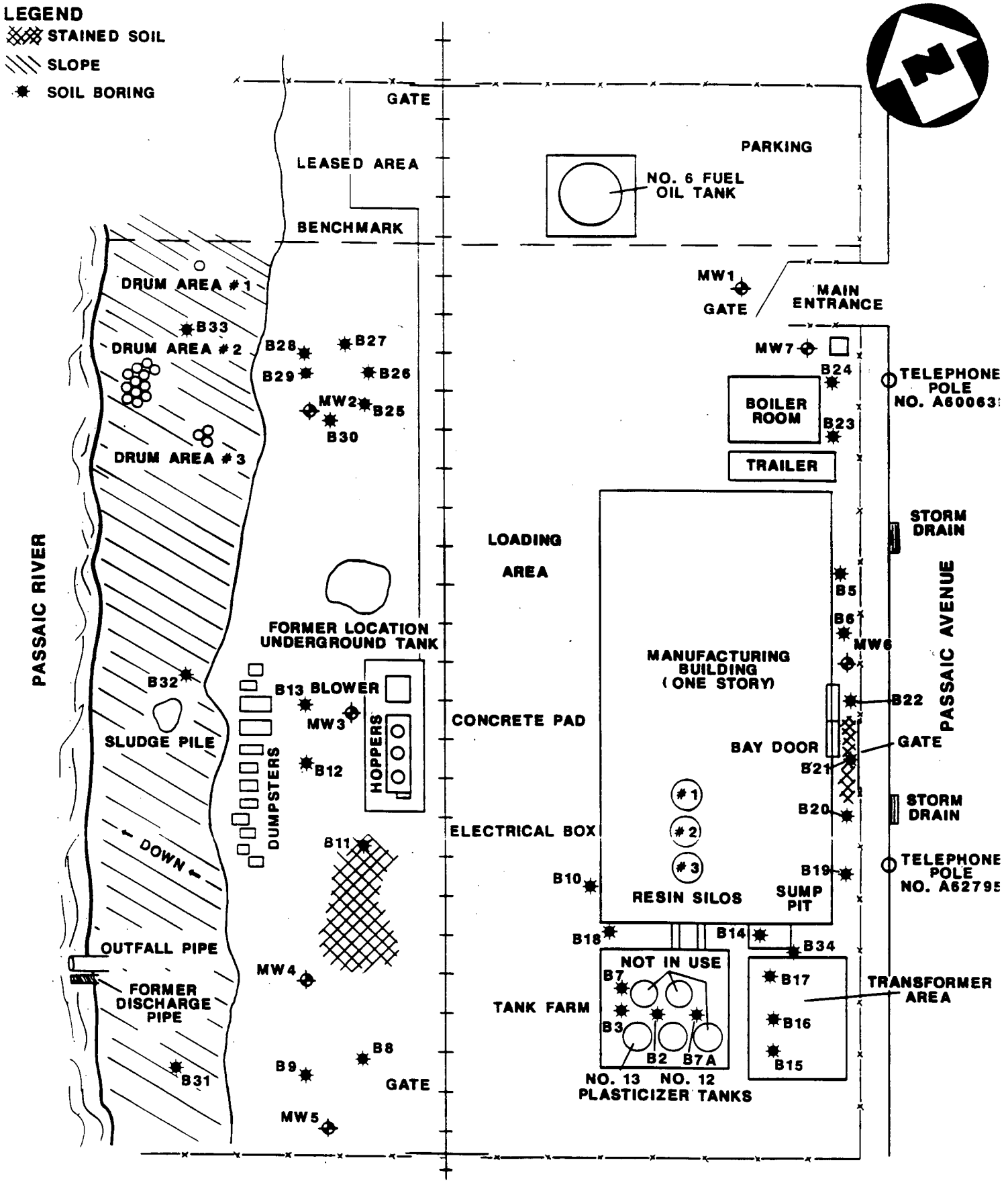
NOTES:
Blank space - compound analyzed for but not detected
E - estimated value
J - estimated value, compound present below CRDL but above IDL
R - analysis did not pass EPA QA/QC
NR - analysis not required

SITE NAME: FRANKLIN PLASTICS CORPORATION
SDG#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204
LAB NAME: VEGAS ANALYTICAL

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

INORGANICS Sample ID No. Traffic Report No. Matrix Units	NJEP-S5 MBCN86 SOIL mg/kg	NJEP-S6(MS/MSD) MBCN87 SOIL mg/kg	NJEP-S7 MBCN88 SOIL mg/kg	NJEP-S8 MBCN89 SOIL mg/kg	NJEP-S9(DUP) MBCN90 SOIL mg/kg	NJEP-RIN1 MBCN91 WATER ug/L	NJEP-RIN2 MBCN92 WATER ug/L	NJEP-RIN3 MBCN93 WATER ug/L	NJEP-RIN4 MBCN94 WATER ug/L	NJEP-RIN5 MBCN95 WATER ug/L	NJEP-TBLK1 N/A N/A ug/L
Aluminum	1070	7450	1710	7410	6280						NR
Antimony	J	87.7 E	J								NR
Arsenic	2.6	14	5.8	6.6	12						NR
Barium	144	1990	106	140	116						NR
Beryllium											NR
Cadmium	55.5	78.2	5.3	1.4	1.1						NR
Calcium	189000	39400	140000	3550	3830	J	J			J	NR
Chromium	55.9	38.4	279	15.8	14.5			19.5			NR
Cobalt	J	J	J	J	J						NR
Copper	23.4	112	103	56.3	54.4						NR
Iron	4960	14700	8210	12900	10800			J		J	NR
Lead	348	2520 E	1430 E	204	90.8						NR
Magnesium	9080	3970	27300	2340	2250			J		J	NR
Manganese	103	292	140	337	340						NR
Mercury	0.2	0.12		0.16	0.11					0.2	NR
Nickel	16.3 E	28.4 E	134	13.4 E	12 E						NR
Potassium	J	J	J	J	J						NR
Selenium			J								NR
Silver											NR
Sodium	R	R	R	R	R	J	J	J	J	R	NR
Thallium											NR
Vanadium	13.3	41.4 E	31.3 E	23.8 E	21.3 E						NR
Zinc	115	878	1010	259	301	J			J	J	NR

NOTES:
Blank space - compound analyzed for but not detected
E - estimated value
J - estimated value, compound present below CRDL but above IDL
R - analysis did not pass EPA QA/QC
NR - analysis not required



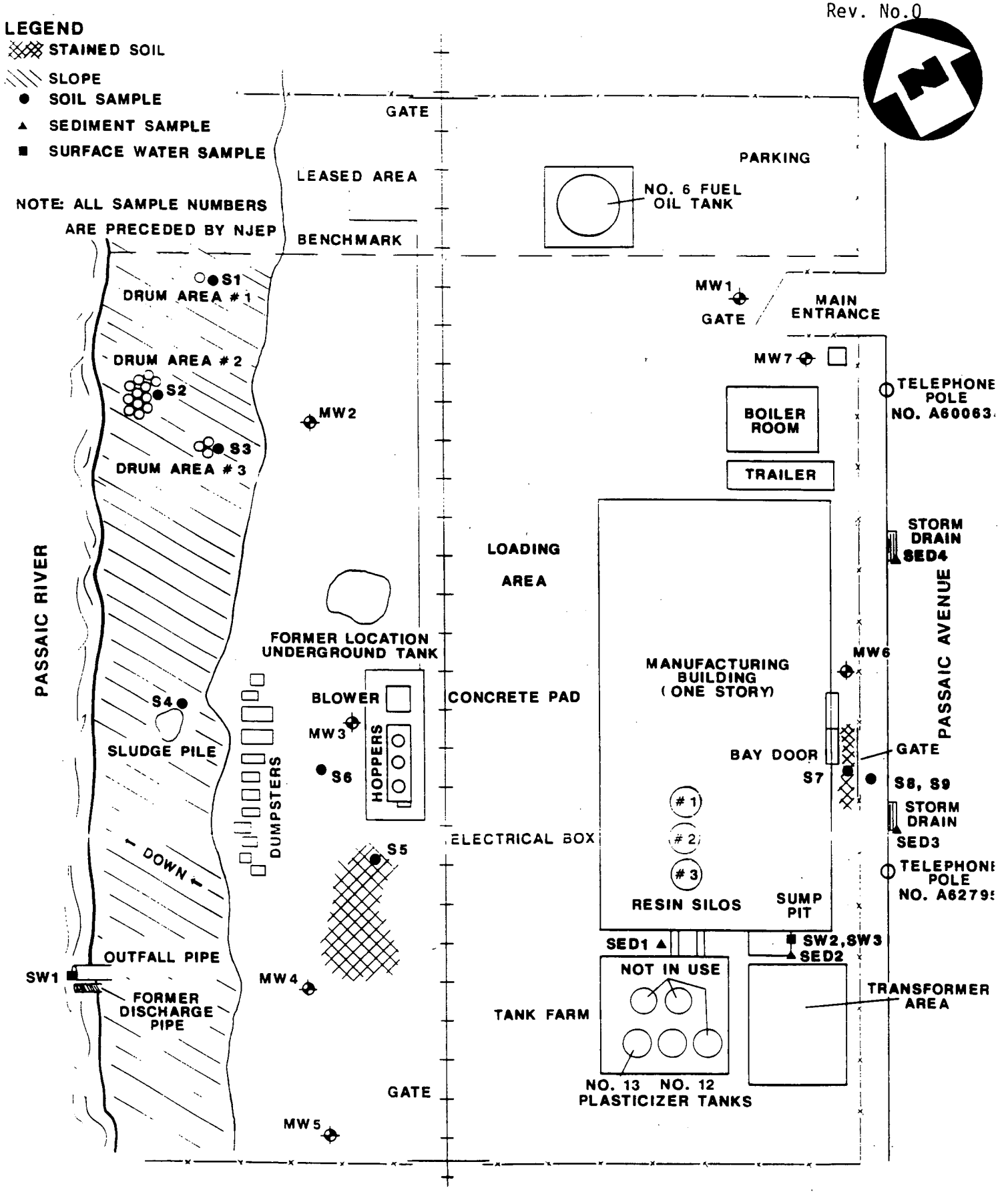
SAMPLE LOCATION MAP - JULY 1987

FRANKLIN PLASTICS CORP., KEARNY, N.J.

NOT TO SCALE

FIGURE 3

NUS CORPORATION



SAMPLE LOCATION MAP

FRANKLIN PLASTICS CORP., KEARNY, N.J.

NOT TO SCALE

FIGURE 4

NUS CORPORATION

PART VII: SITE SUMMARY AND RECOMMENDATIONS (CONT'D)

Franklin is currently in the process of implementing a second phase of ECRA sampling. Recon Systems, Inc. is performing the installation of three deep production wells and approximately six additional soil borings. Data from this sampling were to be presented to the NJDEP by August 22, 1990. A Clean-up Plan is also to be submitted at this time, provided that it is determined that no further sampling is required.

Groundwater analytical data from the ECRA study suggest a release of contaminants to the groundwater. The potential for a surface water release is also possible via the facility's discharge pipe and flooding of waste areas along the Passaic River. Franklin Plastics Corp. is situated along a tidal portion of the Passaic River; the river's uses include secondary contact recreation and maintenance of fish and wildlife populations. Due to the saline content of this portion of the Passaic River, surface water is not used for potable or irrigational purposes with 3 miles downstream of the site. Groundwater is not used for potable purposes, nor are there any sole source aquifers, within 3 miles of the site. The City of Kearny receives its water from the Wanaque Reservoir in Passaic County, New Jersey. No wetlands or critical habitats of federally listed endangered species exist along the migration pathway.

Due to high concentrations of contaminants detected in surface soil samples, the potential exists for a release of contaminants to air via particulates. Approximately 1,300 people reside within 0.25 mile of the site. The potential also exists for contamination to extend to adjacent properties. The possibility of both on-site worker exposure and direct contact exists due to the detection of high concentrations of contaminants in surface soil samples. Based on the potential for a contaminant release to the air and for contamination extending beyond the site boundaries, Franklin Plastics Corp. site is recommended for a **LISTING SITE INSPECTION (LSI).** It is suggested that the LSI include: sampling of adjacent properties to determine if soil contamination extends to neighboring facilities, and particulate sampling to determine if a release to air has occurred.

ATTACHMENT 1

EXHIBIT A

PHOTOGRAPH LOG

FRANKLIN PLASTICS CORP.
KEARNY, HUDSON COUNTY, NEW JERSEY

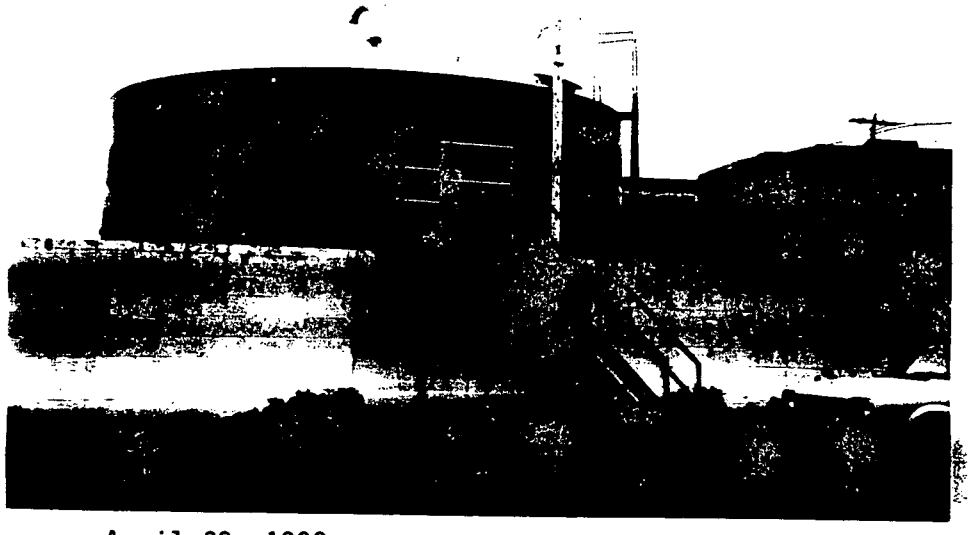
ON-SITE RECONNAISSANCE: APRIL 30, 1990

FRANKLIN PLASTICS CORP.
KEARNY, NEW JERSEY
APRIL 30, 1990

PHOTOGRAPH INDEX

ALL PHOTOGRAPHS TAKEN BY K. CAMPBELL

Photo Number	Description	Time
1P-1	Looking north at 50,000 gallon No. 6 fuel oil tank.	1059
1P-2	Looking northwest at unused tank, toward the Passaic River, at an unused tank truck trailer.	1103
1P-3	Looking southwest at Drum Area No. 2.	1106
1P-4	Apparent tile pieces found in drums in Drum Area No. 2.	1108
1P-5	Looking southwest at Drum Area No. 3.	1112
1P-6	Looking east at on-site debris, which includes solidified sludge.	1119
1P-11	Looking east at condenser blowdown drainage pathway.	1142
1P-15	Looking east at Franklin's transformer area.	1146
1P-12,13,14	Composite view of west and south faces of the manufacturing building, showing loading area and tank farm area.	1144
1P-16	View of facility's open sump pit, located on the south face of the manufacturing building.	1148
1P-17	Looking west from walkway between the transformer area and the tank farm. Drainage pathway is located to the left of steam release.	1150
1P-19	Stained soil along east face of manufacturing building, from Passaic Avenue.	1158
1P-26	Looking south at Franklin Plastics Corp.; along Passaic Avenue, showing possible run-off pathway to storm drain.	1225
1P-24,25	Composite view looking southwest to northwest at rear of property, facing the Passaic River.	1214



1P-1 April 30, 1990 1059
Looking north at 50,000 gallon No. 6 fuel oil tank.

1P-2 April 30, 1990 1103
Looking northwest at unused tank, toward the Passaic River, at an unused tank truck trailer.

FRANKLIN PLASTICS CORP., KEARNY, NEW JERSEY

1P-3 April 30, 1990 1106
Looking southwest at Drum Area No. 2.

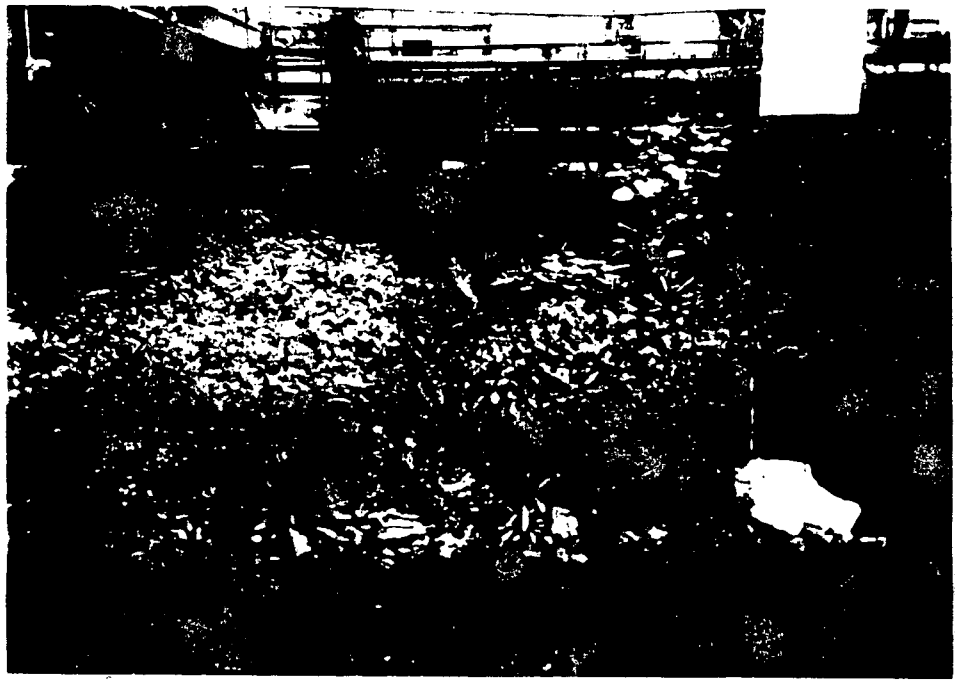
1P-4 April 30, 1990 1108
Apparent tile pieces found in drums in Drum Area No. 2.

FRANKLIN PLASTICS CORP., KEARNY, NEW JERSEY

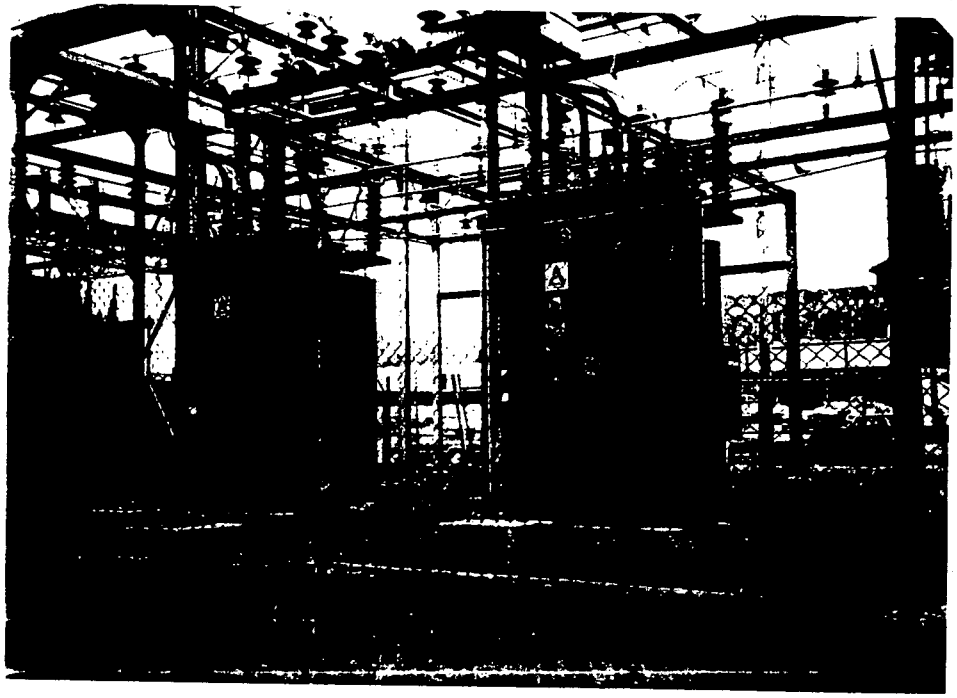
1P-5 April 30, 1990 1112
Looking southwest at Drum Area No. 3.

1P-6 April 30, 1990 1119
Looking east at on-site debris, which includes solidified sludge.

FRANKLIN PLASTICS CORP., KEARNY, NEW JERSEY

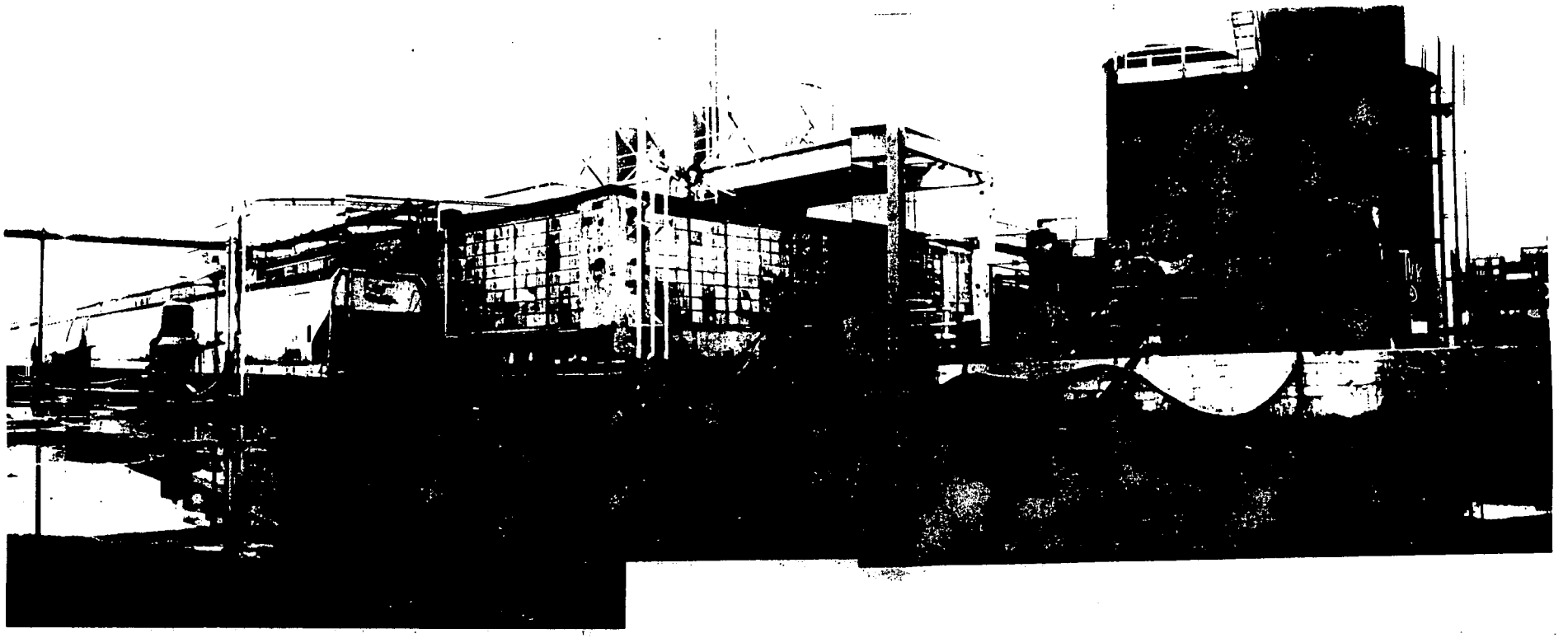


1P-11 April 30, 1990 1142
Looking east at condenser blowdown drainage pathway.



1P-15 April 30, 1990 1146
Looking east at Franklin's transformer area.

FRANKLIN PLASTICS CORP., KEARNY, NEW JERSEY

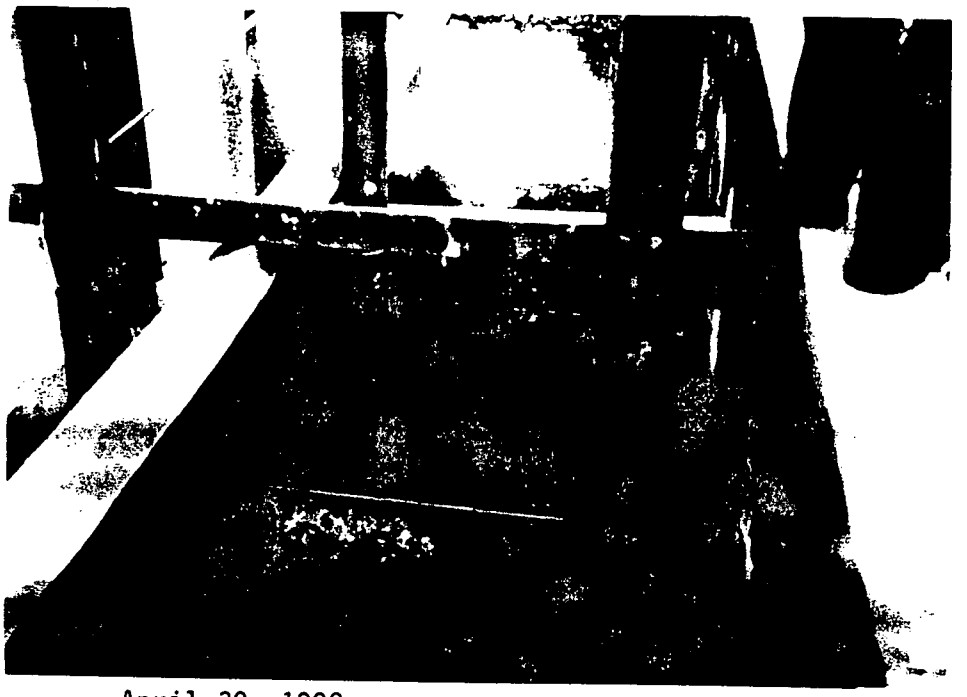


1P-12,13,14

April 30, 1990
Composite view of west and south faces of the manufacturing building, showing loading area and tank farm area.

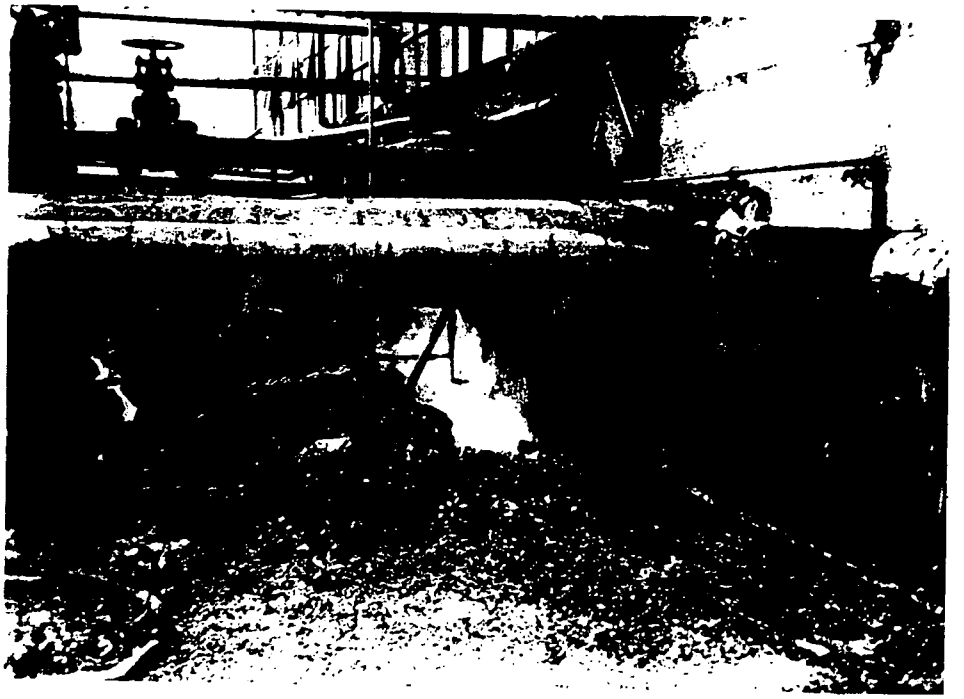
1144

FRANKLIN PLASTICS CORP., KEARNY, NEW JERSEY



1P-16

April 30, 1990 1148
View of facility's open sump pit, located on the south face of the manufacturing building.



1P-17

April 30, 1990 1150
Looking west from walkway between the transformer area and the tank farm. Drainage pathway is located to the left of steam release.

FRANKLIN PLASTICS CORP., KEARNY, NEW JERSEY

1P-19 April 30, 1990 1158
Stained soil along east face of manufacturing building, from Passaic Avenue.

1P-26 April 30, 1990 1225
Looking south at Franklin Plastics Corp; along Passaic Avenue, showing possible run-off pathway to storm drain.

NUS CORPORATION

FRANKLIN PL. FICS CORP., KEARNY, NEW JERSEY

1-24,25

April 30, 1 00

Composite view looking southwest to northwest at rear of property facing the Passaic River.

EXHIBIT B

PHOTOGRAPH LOG

FRANKLIN PLASTICS CORP.
KEARNY, HUDSON COUNTY, NEW JERSEY

SAMPLING SITE INSPECTION: JUNE 5, 1990

FRANKLIN PLASTICS CORP.
KEARNY, HUDSON COUNTY, NEW JERSEY
JUNE 5, 1990
PHOTOGRAPH INDEX

ALL PHOTOGRAPHS TAKEN BY K. CAMPBELL

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1P-3	Richard Settino collecting NJEP-SED3 from storm drain on Passaic Avenue.	1114
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FRANKLIN PLASTICS CORP.
KEARNY, HUDSON COUNTY, NEW JERSEY
JUNE 5, 1990

PHOTOGRAPH INDEX
(cont'd)

Photo Number	Description	Time
1P-19	Looking south at Resin Silo No. 1 from location NJEP-S3.	1614
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1P-20	Richard Settino collecting NJEP-S5 from area of stained soil west of manufacturing building.	1639
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FRANKLIN PLASTICS CORP., KEARNY, HUDSON COUNTY, NEW JERSEY

1P-1

June 5, 1990
Richard Settino collecting NJEP-SW1 from Franklin discharge pipe on the Passaic River.

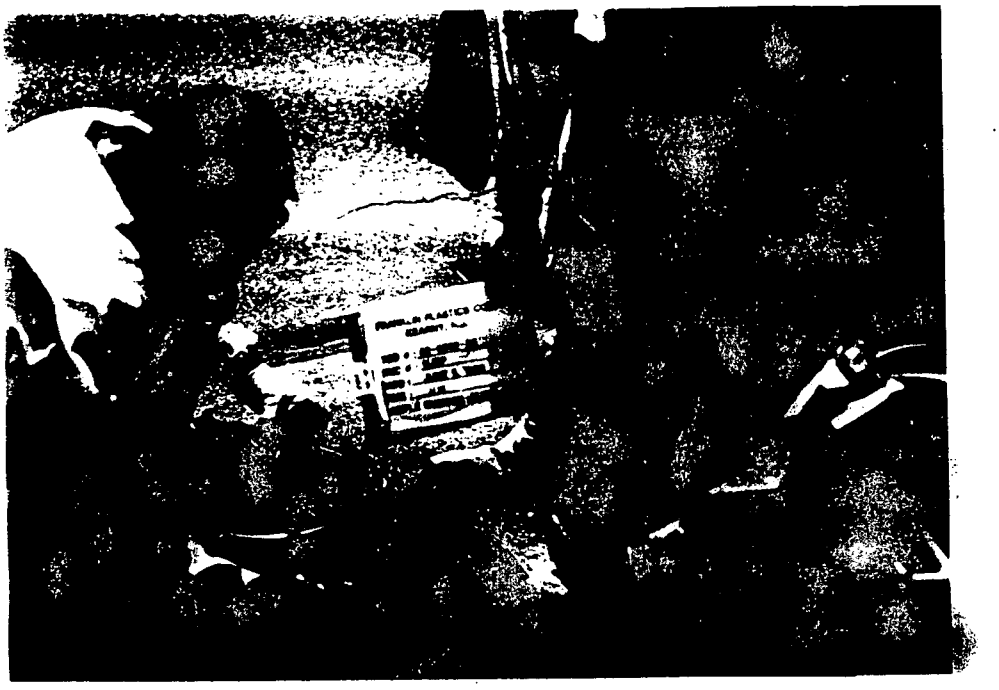
1002

1P-2

June 5, 1990
Looking north from location of NJEP-SED3..

1100

FRANKLIN PLASTICS CORP., KEARNY, HUDSON COUNTY, NEW JERSEY



1P-3 June 5, 1990 1114
Richard Settino collecting NJEP-SED3 from storm drain on Passaic Avenue.

1P-4 June 5, 1990 1135
Bob Yaeger collects NJEP-S8 along Passaic Avenue.

FRANKLIN PLASTICS CORP., KEARNY, HUDSON COUNTY, NEW JERSEY

P-5

June 5, 1990
Bob Yaeger collecting NJEP-S9 along Passaic Avenue.

1140

June 5, 1990
Bob Yaeger collecting NJEP-SED4 from storm drain on Passaic Avenue.

1200

FRANKLIN PLASTICS CORP., KEARNY, HUDSON COUNTY, NEW JERSEY

1P-7 June 5, 1990 1246
Richard Settino collecting NJEP-S7 east of manufacturing building.

1P-8 June 5, 1990 1245
Bob Yaeger collects NJEP-SW2 from sump pit, located along the south face of manufacturing building.

FRANKLIN PLASTICS CORP., KEARNY, HUDSON COUNTY, NEW JERSEY

1P-9 June 5, 1990 1350
Bob Yaeger collects NJEP-SW3 from sump pit on south side of manufacturing building.

1P-10 June 5, 1990 1408
Bob Yaeger collects NJEP-SED2 from sump pit on south side of manufacturing building.

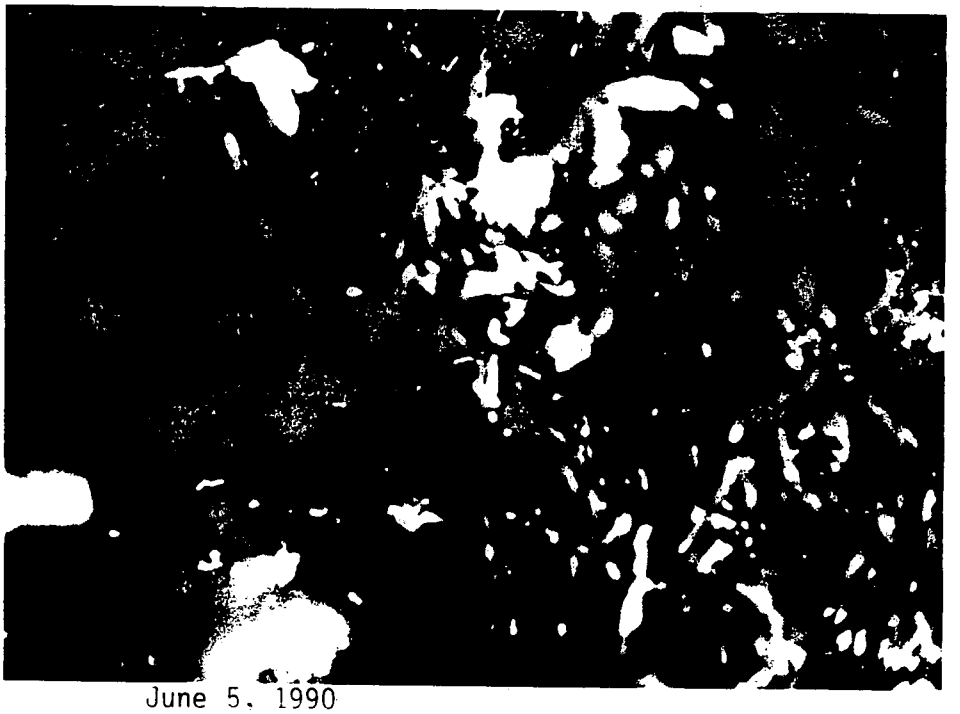
FRANKLIN PLASTICS CORP., KEARNY, HUDSON COUNTY, NEW JERSEY

1P-12 June 5, 1990 1520
Bob Yaeger collects NJEP-S1 from drum area No. 1 along Passaic River.

1P-13 June 5, 1990 1526
Looking due south from location of NJEP-S1 at Resin Silo No. 1 - approximately 60 feet from Passaic River.

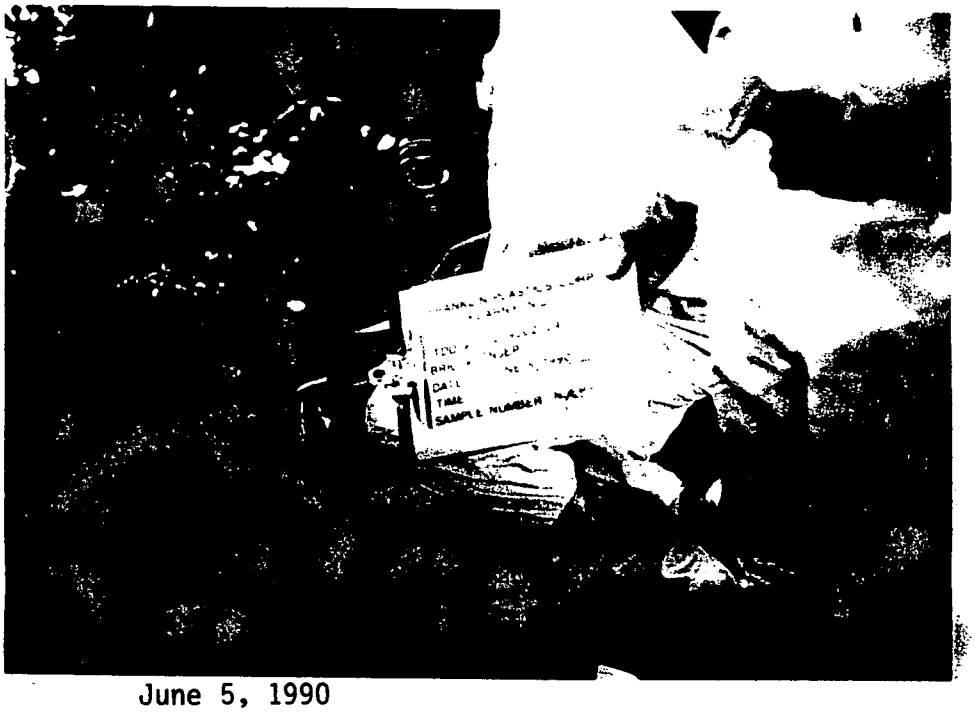
FRANKLIN PLASTICS CORP., KEARNY, HUDSON COUNTY, NEW JERSEY

1P-14 June 5, 1990 1526
Looking east from location NJEP-S1 toward corner of pavement near leased property line.

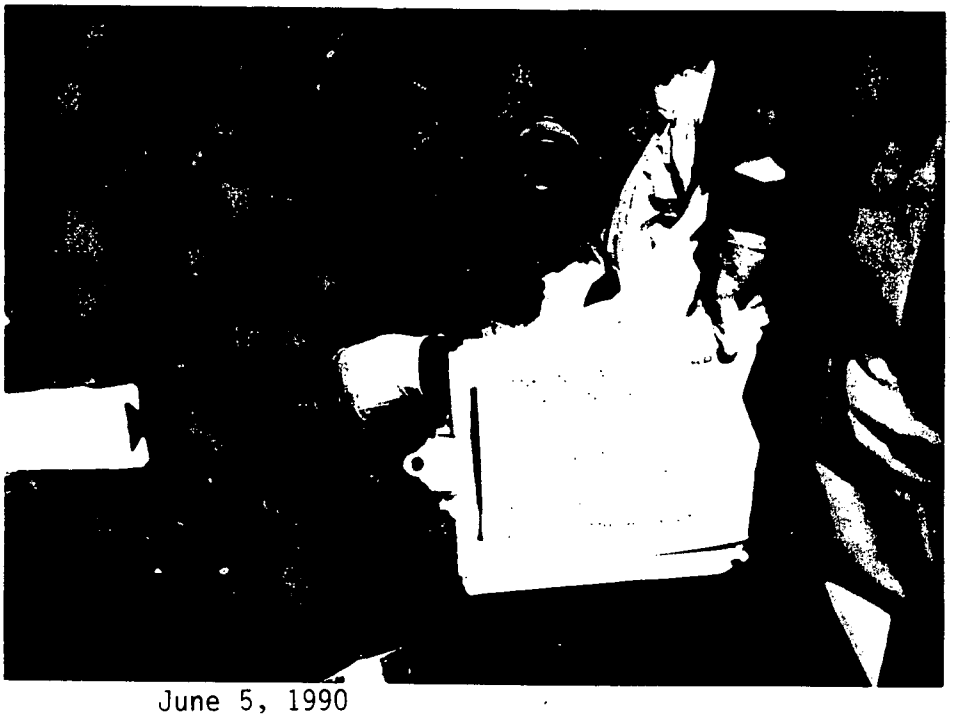


1P-15 June 5, 1990 1555
Animal burrow in urban fill area showing tile pieces.

FRANKLIN PLASTICS CORP., KEARNY, HUDSON COUNTY, NEW JERSEY

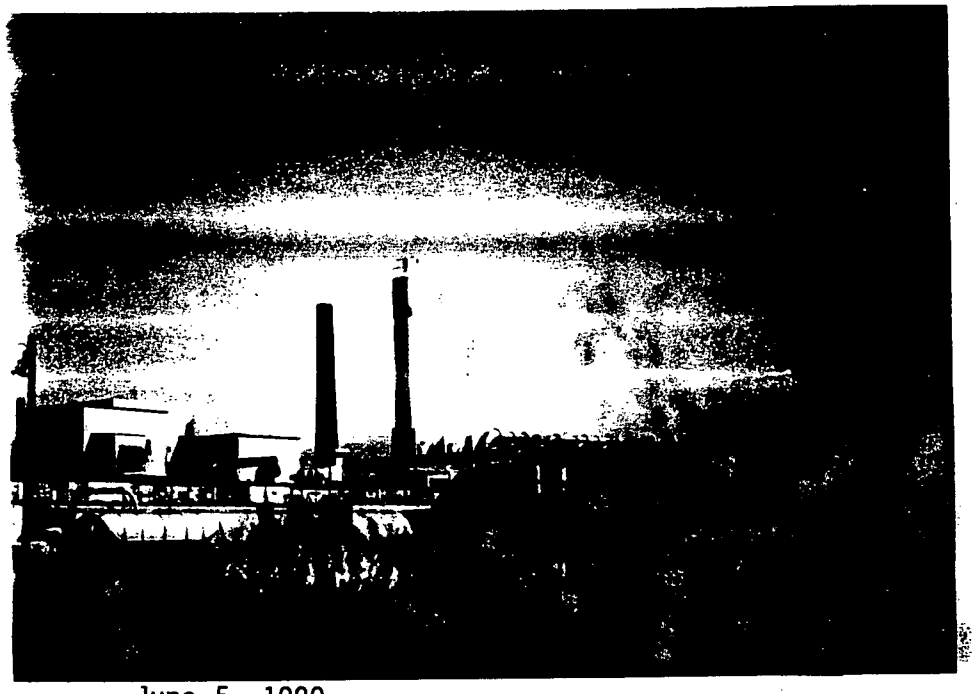


1P-16 **June 5, 1990** 1600
Bob Yaeger collecting NJEP-S4 from area of sludge pile.

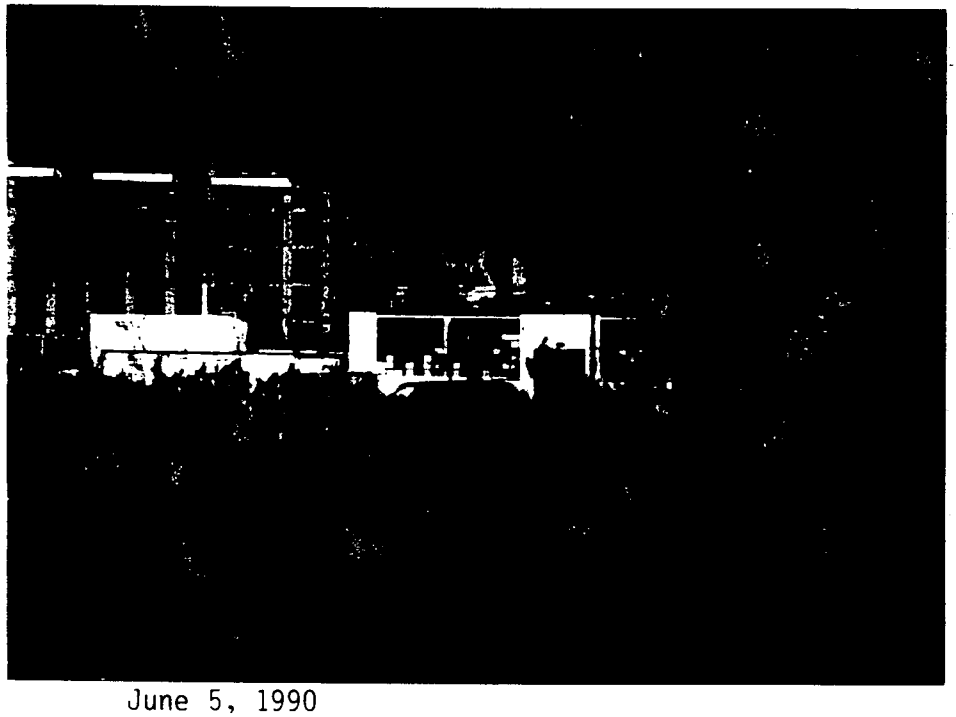


1P-17 June 5, 1990 1612
Bob Yaeger collecting NJEP-S3 from drum area No. 3, along Passaic River.

FRANKLIN PLASTICS CORP., KEARNY, HUDSON COUNTY, NEW JERSEY



1P-18 June 5, 1990 1614
Looking south at Resin Silo No. 1 from location NJEP-S3.



1P-19 June 5, 1990 1615
Looking southeast at rear of manufacturing building from location NJEP-S3.

FRANKLIN PLASTICS CORP., KEARNY, HUDSON COUNTY, NEW JERSEY

1P-20 **June 5, 1990** 1639
Richard Settino collecting NJEP-S5 from area of stained soil west of manufacturing building.

1P-21 June 5, 1990 1655
Richard Settino collecting NJEP-S6 from hopper/blower area west of manufacturing building.

FRANKLIN PLASTICS CORP., KEARNY, HUDSON COUNTY, NEW JERSEY

1P-22 June 5, 1990 1710
Richard Settino collecting NJEP-SED1 from drainage pathway for condenser blowdown, south of manufacturing building.

1P-23 June 5, 1990 1713
Drainage ditch for condenser blowdown.

FRANKLIN PLASTICS CORP., KEARNY, HUDSON COUNTY, NEW JERSEY

1P-24 June 5, 1990 1740
Richard Settino collecting NJEP-S2 from drum area No. 2, along Passaic River.

1P-25 June 5, 1990 1745
Looking south at Resin Silo No. 1 from location of NJEP-S2.

ATTACHMENT 2

REFERENCES

1. Letter from Thomas B. Harrington, Supervisor, Surface Water Unit, Metro Bureau of Regional Enforcement, New Jersey Department of Environmental Protection, to Mr. Joseph Ronzo, Plant Manager, Franklin Plastics Corp., September 1, 1989. Re: Compliance Evaluation Inspection, September 1, 1989.

2. New Jersey Department of Environmental Protection, Division of Waste Management, Bureau of Field Operations, Investigative Report, August 1, 1984.

3. U.S. EPA Contract Laboratory Program, Compuchem Laboratories (Organic Analysis), Vegas Analytical Labs,Inc. (Inorganic Anaysis), Case No. 14204, Laboratory analysis from NUS Region 2 FIT Site Inspection conducted on June 5, 1990.

4. New Jersey Department of Environmental Protection, Division of Waste Management, Bureau of Field Operations, Investigative Report, December 20, 1984.

5. New Jersey Department of Environmental Protection, Division of Waste Management, Notice of Violation, Franklin Plastics, December 20, 1984.

6. Letter from Joseph Ronzo, Plant Engineer, Franklin Plastics Corp., to Mr. Boleslaw Czachor, New Jersey Department of Environmental Protection, Division of Waste Management, January 5, 1985. Re: Notice of Violation.

7. Potential Hazardous Waste Site Identification and Preliminary Assessment, U.S. Environmental Protection Agency, Site Number NJ000010042, August 6, 1980.

8. Telecon Note: Conversation between Sharon, Kearny Tax Assessor's Office, and K. Campbell, NUS Corporation, February 20, 1990.

9. Herpers, H. and H.C. Barksdale. Preliminary Report on the Geology and Ground-Water Supply of the Newark, New Jersey, Area, Special Report 10. State of New Jersey Department of Conservation and Economic Development, Division of Water Policy and Supply, 1951.

10. Project Note: Sole Source Aquifers in Region II with attached map of Nationally Designated Sole Source Aquifers and U.S. EPA Federal Register, Aquifers Underlying Western Essex and Southeastern Morris Counties, N.J.; Determination, Vol. 45, No. 91, May 8, 1980.

11. Passaic River Coalition. The Buried Valley Aquifer Systems: Resources and Contamination, 1986.

12. Uncontrolled hazardous waste site ranking system: A user's manual, 40 CFR, Part 300, Appendix A, 1986.

13. Sampling and Analysis Plan Results for Franklin Plastics Corporation, Recon Systems, Inc., October 1, 1987.

14. Telecon Note: Conversation between Andrew Dillman, ECRA Case Manager, New Jersey Department of Environmental Protection, and K. Campbell, NUS Corporation, July 24, 1990.

15. Three-Mile Vicinity Map for Franklin Plastics Corp; based on U.S. Geological Survey Topographic Maps, 7 5 minute series, Quadrangles for: "Orange, N.J.", 1955, revised 1981, "Jersey City, N.J - N Y " 1967, revised 1981, "Elizabeth, N.J. - N.Y.", 1967, revised 1981, and "Weehawken N J N Y " 1967, revised 1981

REFERENCES (CONT'D)

16. Telecon Note: Conversation between Carol Donnelly, Kearny Water Department, and Sue Lenczyk, NUS Corporation, January 18, 1990.

17. Telecon Note: Conversation between Carole Schmidt, Kearny Water Department, and David Heim, NUS Corporation, July 6, 1989.

18. Water Supply Overlay Map, Sheet 26, New Jersey Department of Environmental Protection, August 1975.

19. Surface Water Quality Standards N.J.A.C. 7:9-4, Index D: Surface Water Classifications of the Passaic, Hackansack and N.Y. Harbor Complex Basin, New Jersey Department of Environmental Protection, Division of Water Resources, May 1985.

20. U.S. Department of the Interior, Federal Water Pollution Control Administration, Northeast Region, Report on the Quality of the Interstate Waters of the Lower Passaic River and Upper and Lower Bays of New York Harbor, November 1969.

21. Preliminary Site Assessment, Franklin Plastics-Kearny, NJ, Fred C. Hart Associates, Inc., September 1984.

22. Position Statement: Risk Assessment of Phthalate Esters at Franklin Plastics Corporation, Kearny, New Jersey, February 2, 1988.

23. Letter from Paul C. Kurisko, P.E., Chief, Bureau of Industrial Waste Management, Water Quality Management, New Jersey Departement of Environmental Protection, to Joseph Ronzo, Plant Engineer, Franklin Plastics Corp. June 28, 1985. Re: Final NJPDES/DSW Permit No. NJ0002194, Effective Date: August 1, 1985, Expiration Date: July 31, 1990.

24. Field Notebook No. 0563, Franklin Plastics Corp., TDD No. 02-9002-24, On-Site Reconnaissance and Sampling Site Inspection, NUS Corporation Region 2 FIT, Edison, New Jersey, April 30, 1990 and June 5, 1990.

25. Letter from George Caporale, Chief, Bureau of Permits Administration, Water Quality Management Element, New Jersey Department of Environmental Protection, to Franklin Plastics Corp., January 17, 1989. Re: Violation of Discharge Monitoring Report Non-Submittal NJPDES Permit No. NJ0002194, .

26. U.S. Department of the Interior, Fish and Wildlife Services, Atlas of National Wetlands Inventory Maps for New Jersey, 1984.

27. Letter from Clifford G. Day, Supervisor, U.S. Department of the Interior, Fish and Wildlife Services, to Kathy Campbell, NUS Corporation, March 19, 1990 Re: Federally listed endangered species.

28. General Sciences Corporation, Graphical Exposure Modeling System (GEMS), Landover, Maryland, 1986.

29. Spill Prevention, Control and Countermeasure Plan for Franklin Plastics Corporation, Kearny, New Jersey. New England Pollution Control Co., Inc., March 19, 1986.

30. Administrative Consent Order, State of New Jersey, Department of Environmental Protection, Division of Waste Management, Hazardous Site Mitigation Administration, Franklin Plastics Corp., ECRA Case No. 86026, February 14, 1986.

REFERENCES (CONT'D)

31. Letter from Robert M. Wolfertz per Glenn H. Miller, Jr., Recon Systems, Inc., to Ms. Christine Hylemon, New Jersey Department of Environmental Protection, Bureau of Environmental , Evaluation, Cleanup and Responsibility Assessment, November 3, 1987. Re: Analytical results of deep production well .

32. Letter from Thomas B. Harrington, Field Operations Supervisor, Metro Bureau of Regional Enforcement, New Jersey Department of Environmental Protection, to Mr. Joseph Ronzo, Plant Engineer, Franklin Plastics Corp., September 27, 1985. Re: Compliance Evaluation Inspection, .

33. Letter from Robert M. Wolfertz and Stephen E. Laney, Recon Systems, Inc., to Mr. Jeffrey Fehr, New Jersey Department of Environmental Protection, Division of Water Resources, Bureau of Groundwater Quality Management, April 4, 1988. Re: Site Geotechnical Information, .

34. W.M. Walsh Company, Inc., Test Boring Data from Franklin Plastics Corp., Kearny, New Jersey, September 1976.

35. U. S. EPA Superfund Program, Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), P. 73, August 9, 1990.

36. Election Division, New Jersey Department of State, CN 304, Trenton, NJ, Congressional Districts, January 1987.

REFERENCE NO. 1

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
METRO BUREAU OF REGIONAL ENFORCEMENT
2 BABCOCK PLACE
WEST ORANGE, NEW JERSEY 07052

Jorge H. Berkowitz, Ph.D.
Acting Director

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

September 1, 1989

Mr. Joseph Ronzo, Plant Manager
Franklin Plastics Corporation
113 Passaic Avenue
Kearny, NJ 07032

Re: Compliance Evaluation Inspection
Franklin Plastics
NJPDES No. NJ 0002194
Kearny/Hudson County

Dear Mr. Ronzo:

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on July 13, 1989. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "CONDITIONALLY ACCEPTABLE" due to the following deficiency:

1) Maximum values have not been reported on the Discharge Monitoring Reports for the period May 1, 1988 - April 30, 1989.

The deficiency noted above is a violation of the terms and conditions of your NJPDES permit and/or the Water Pollution Control Act Regulations (N.J.A.C. 7:14A-1 et seq.). You are requested to institute corrective measures. A written report concerning specific details of remedial measures to be taken, as well as an implementation timetable, must be submitted to this Department and USEPA, Permits Administration Branch, within thirty (30) calendar days of the date of this correspondence.

Please direct all correspondence and inquires to James J. Genovese, the Senior Environmental Specialist responsible for this case, who can be reached at (201) 669-3900 or by letter through this Division.

Very truly yours,

Thomas B. Harrington
Supervisor
Surface Water Unit
Metro Bureau of
Regional Enforcement

E9

c: Permits Administration, USEPA
Patrick Durack, USEPA
Edward Grosvenor, H.O.
Sandra DeRogatis, Franklin Plastics

bc: Zaheer Hussain
Central File

DWR-053

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

PERMIT # NJ0002194 NO. OF DISCHARGES 001 CLASS Min - Ind

DISCHARGER Franklin Plastics Corporation

OWNER Same as discharger

MUNICIPALITY Kearny COUNTY Hudson WATERSHED CODE P

LOCATION 113 Passaic Avenue

RECEIVING WATERS Passaic River STREAM CLASS SE3

LICENSED OPERATOR & PLANT CLASS —

TRAINEE/ASSISTANT — OTHER INFO. (201) 998-8002

DEFICIENCIES OR COMMENTS

— See Attached Letter —

OVERALL RATING ☐ Acceptable ☒ Conditionally Acceptable ☐ Unacceptable

EVALUATOR James J. Genovese TITLE Senior Environmental Specialist

INFORMATION FURNISHED BY (Name) Joseph Renzo

(Title) Plant Manager (Organization) Franklin Plastics Corp.

DATE OF INSPECTION July 13, 1989

N.J.D.E.P.
D.W.R.
DISCHARGE SURVEILLANCE REPORT

Permit #: NJ0002917
Date: July 13, 1989

Franklin Plastics

INDUSTRIAL TREATMENT PROCESS EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

		RATING	COMMENTS
GENERAL	DISCHARGE # 001	---	
	WASTEWATER SOURCE(S)	---	Non Contact Cooling Water for Lab, Mixer Jacket, Rite-Mix
	CONTINUITY OF OPERATION	---	Intermittent
	BYPASSES/OVERFLOWS	NA	
	S.P.C.C. PLAN	S	Revised 1987
	ALARM SYSTEMS	NA	
	ALTERNATE POWER SUPPLY	NA	
TREATMENT PROCESSES			
			Note: Facility is under ECRA review. Case No. 86026
		NA	Manager: Andy Dillman
SLUDGE HANDLING			
	DISPOSAL SITE	—	
OTHER INFORMATION	FLOW METER & RECORDER	S	Bucket and Stop Watch
	RECORDS	S	
	SAMPLING PROCEDURES	S	Facility Personnel
	ANALYSES PERFORMED BY	S	WATER Works Lab Inc. East Orange, N.J. (Cert # 13573)
	Manufacture plastic pellets from plastic powder + o/l.		
	Hours of Operation: 5 days/wk - 24 hrs/day		
	Permit Expires July 31, 1990		
	FINAL EFFLUENT APPEARENCE	NI	No discharge at inspection. Plant shut down for yearly maintenance - 7/5/89 → 7/18/89
	REC. WATERS APPEARENCE	—	Passaic River

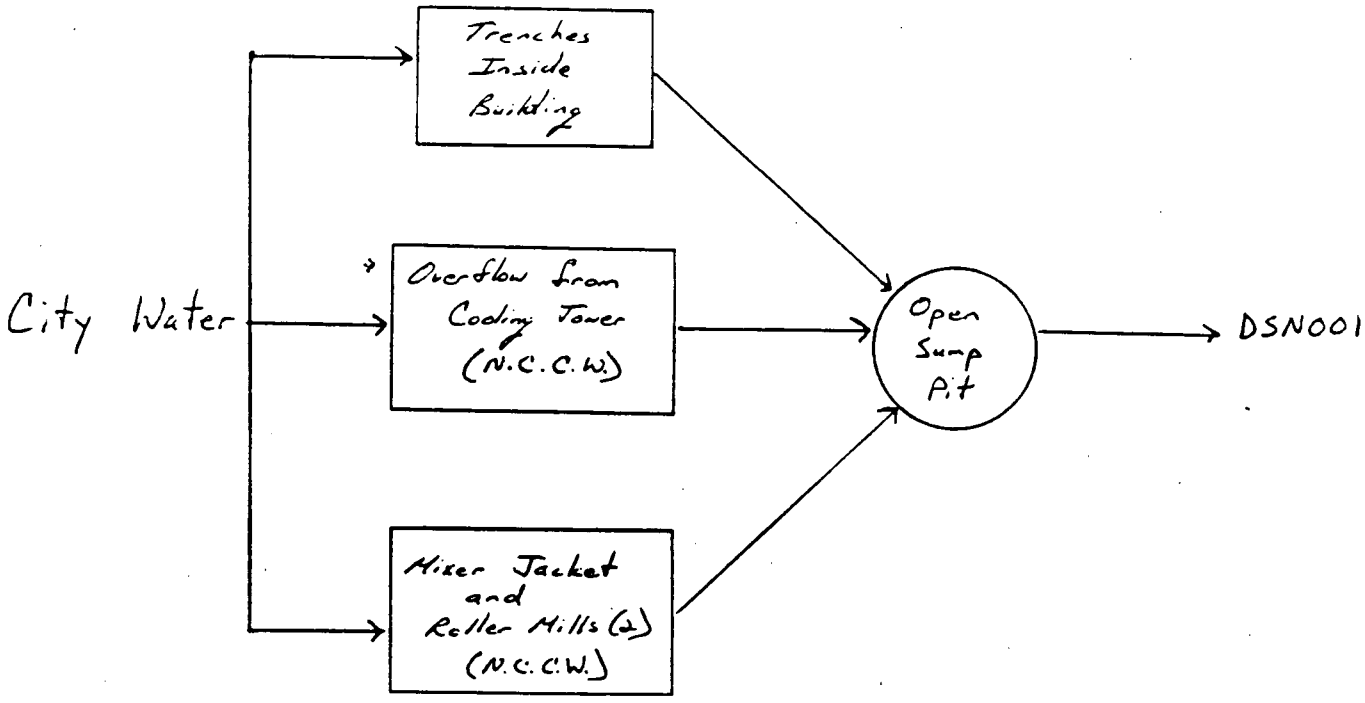
NE .RSEY DEPARTMENT OF ENVIRONMENTAL PR CTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

Permit # NJ0002914
Date July 13 1989

Franklin Plastics

PLANT DIAGRAM AND FLOW SEQUENCE:



No Samples Taken

DISCHARGE DATA

SOURCE: Discharge Monitoring Reports PERIOD: May 1 1988 - April 30, 1989

DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA

MONITORING DEFICIENCIES: Maximum values are not being reported on DMR's.

REFERENCE NO. 2

DIVISION OF WASTE MANAGEMENT
BUREAU OF FIELD OPERATIONS

HW/EF #_____

INVESTIGATIVE REPORT

Inspector: B. Czachor Date: 8/1/84 Time In: 1000 Time Out: 1110 DWM Incident Report #: _____

Company Name: Franklin Plastics Corp. Telephone: (201) 998-8002

EPA ID # none Property Owner: _____

Street: 113 Passaic Avenue Address: _____

Town: Kearny, N.J. 07032

County: Hudson

Lot: _____ Block: _____

Type Ownership: _____

Complaint: Maria Petex - DEP, ECRA

Origin of Complaint: Incident report #84-07-24-01N

Samples taken? ☐ YES ☒ NO

Photos taken? ☐ YES ☒ NO

Findings:

On Wednesday, 8/1/84 at approximately 1000 hours I arrived at the Franklin Plastics Corp. for checking on company storage practice of chemicals as indicated in incident report #84-07-24-01N.

The company manufacturers plastic pellets for another plastic industry. The material used for production at this plant is as follows: resins, plastisizers and oils. The manufacturing process does not generate any waste, and company is not a notifier under RCRA regulations. All raw materials are stored inside the building (drums and bags) and in storage tanks.

Observations:

1) On the area east of a boiler room there were four drums of a #2 fuel oil and four drums of kerosene palletized and sitting on the ground. Mr. T. Ronzo told me that those drums will be transferred into the building.

Incident Report #: _____ HW/EF # _____

Subject: Franklin Plastics Corp. Date: 8/1/84

Findings and Summary:

2) On the yard by south-western corner of the factory building, I noted large area about 150-200 sq. yards, heavily contaminated with oil like substance. During my visit I observed two spills on the ground being cleaned by the worker. Mr. J. Ronzo informed me that it is an area where a liquid plastisizer is discharged from the tank trailers into the pipes for storage. He also told me that the area is asphalt paved and contamination is only on top, it is occuring when hoses are connected and some oils are dripping from the tractors.

3) On eastern side of the building and on the electric transformers area I observed a heavy contamination on the ground, with oil-like substance. Mr. J. Ronzo told me that spots of contaminated ground by the building wall came from the steam releasing pipes, but he could not explain to me about contamination by transformers.

4) Some 40-50 steel, 35 gal. blue drums were noted stored on the southern area of the facility. The drums were palletized, stacked three high and according to Mr. J. Ronzo they were empty. I checked a few of them by banging them, they sounded empty. Mr. J. Ronzo told me that he will remove those drums as soon as he finds a scrap metal dealer willing to take those drums.

Recommendations:

Mr. Ronzo was recommended to clean up all contaminated areas and to dispose of clean out material properly.

Form DWM-008 B
3/83

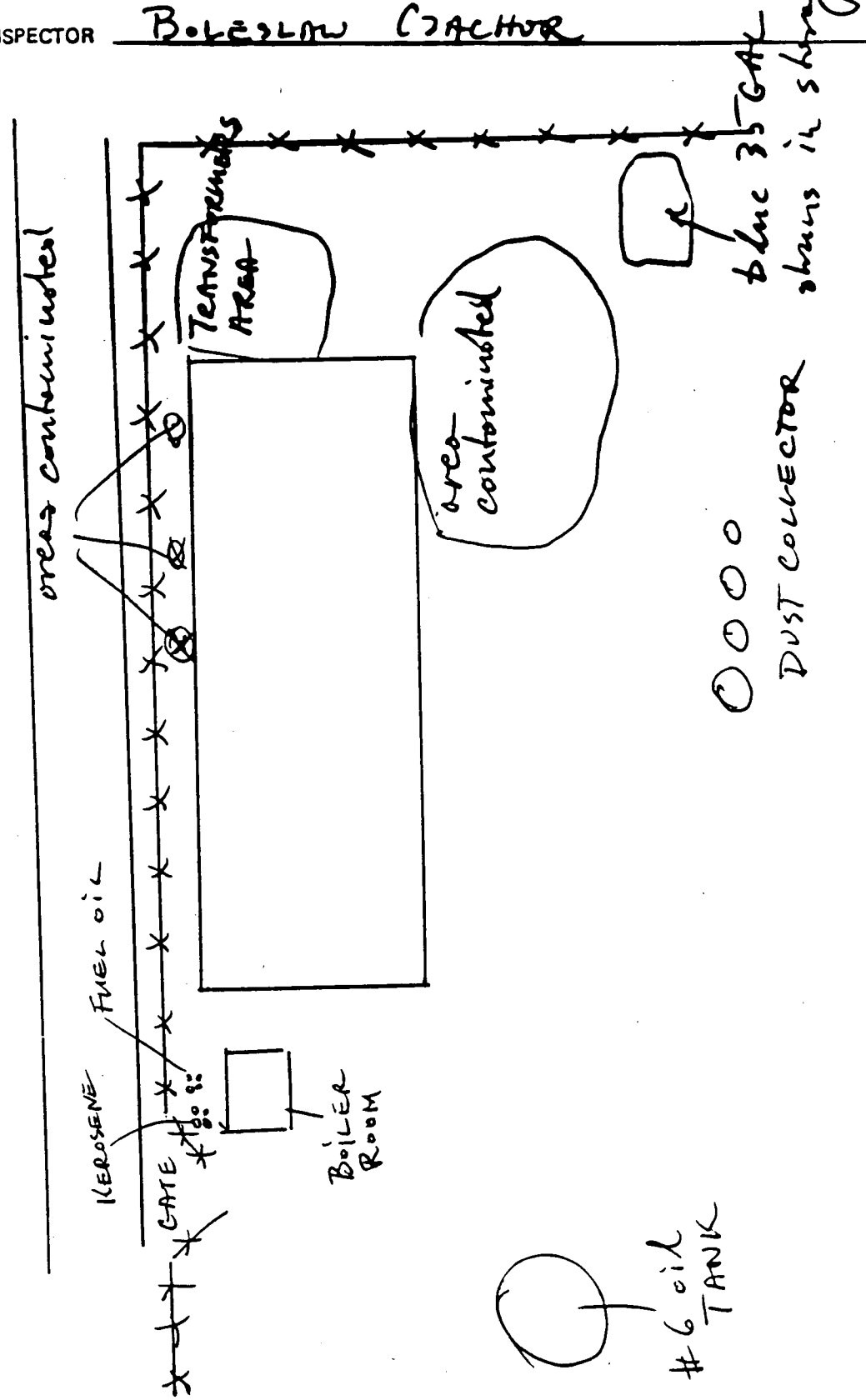
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

INSPECTION REPORT

SKETCH

NAME OF FACILITY FRANKLIN PLASTICS CORP. DATE 08/01/84

INSPECTOR BOLESLAW CZACHOR



REFERENCE NO. 3

- COPY OF CLP DATA

(REDLINED AND MARKED)

- COMPUTER QA'd PRINTOUT

SITE NAME: Franklin Plastics

CASE# AND/OR SAS#: 12404

BRICS#: NJED

TDD#: 02-9003-04

SAMPLING TRIP REPORT

SITE NAME:	Franklin Plastics Corp.
TDD NO.:	02-9002-24
SAMPLING DATE:	June 5, 1990
EPA CASE NO.:	141204

1. Site Location: See Figure 1
2. Sample Locations: See Figure 2
3. Sample Descriptions See Table 1
4. Laboratories Receiving Samples:

Sample Type	Name and Address of Laboratory
Organic	Compuchem Laboratories 3308 Chapel Hill/Nelson Highway P.O. Box 12652 RTP, N.C. 27709
Inorganic	Vegas Analytical Labs, Inc. 3894 Schiff Drive Las Vegas, NV 89103

5. Sample Dispatch Data:

A total of nine aqueous and thirteen soil/sediment samples for organic analysis were shipped by FIT 2 personnel via Federal Express under Airbill No: 7211185693 to CompuChem Laboratories on June 5, 1990 at 1905 hours.

A total of eight aqueous and thirteen soil/sediment samples for inorganic analysis were shipped by FIT 2 personnel via Federal Express under Airbill No. 6097382970 to Vegas Analytical Labs, Inc. on June 5, 1990 at 1905 hours.

5. On-Site Personnel:

Name	Organization	Duties on Site
Kathy Campbell	NUS Corporation, FIT 2	Site Manager, Written and Photographic Documentation
Tom Varner	NUS Corporation, FIT 2	Site Safety Officer
Chris Agnew	NUS Corporation, FIT 2	Sample Management Officer
Bob Yaeger	NUS Corporation, FIT 2	Sampler
Rich Settino	NUS Corporation, FIT 2	Sampler
Joseph Ronzo	Franklin Plastics Corp.	Site Contact
Bill Moody	Recon Systems, Inc.	Environmental Consultant for Franklin Plastics Corp.

7. Weather Conditions:

Sunny, approximately 65°, wind NW at 0 to 5 mph.

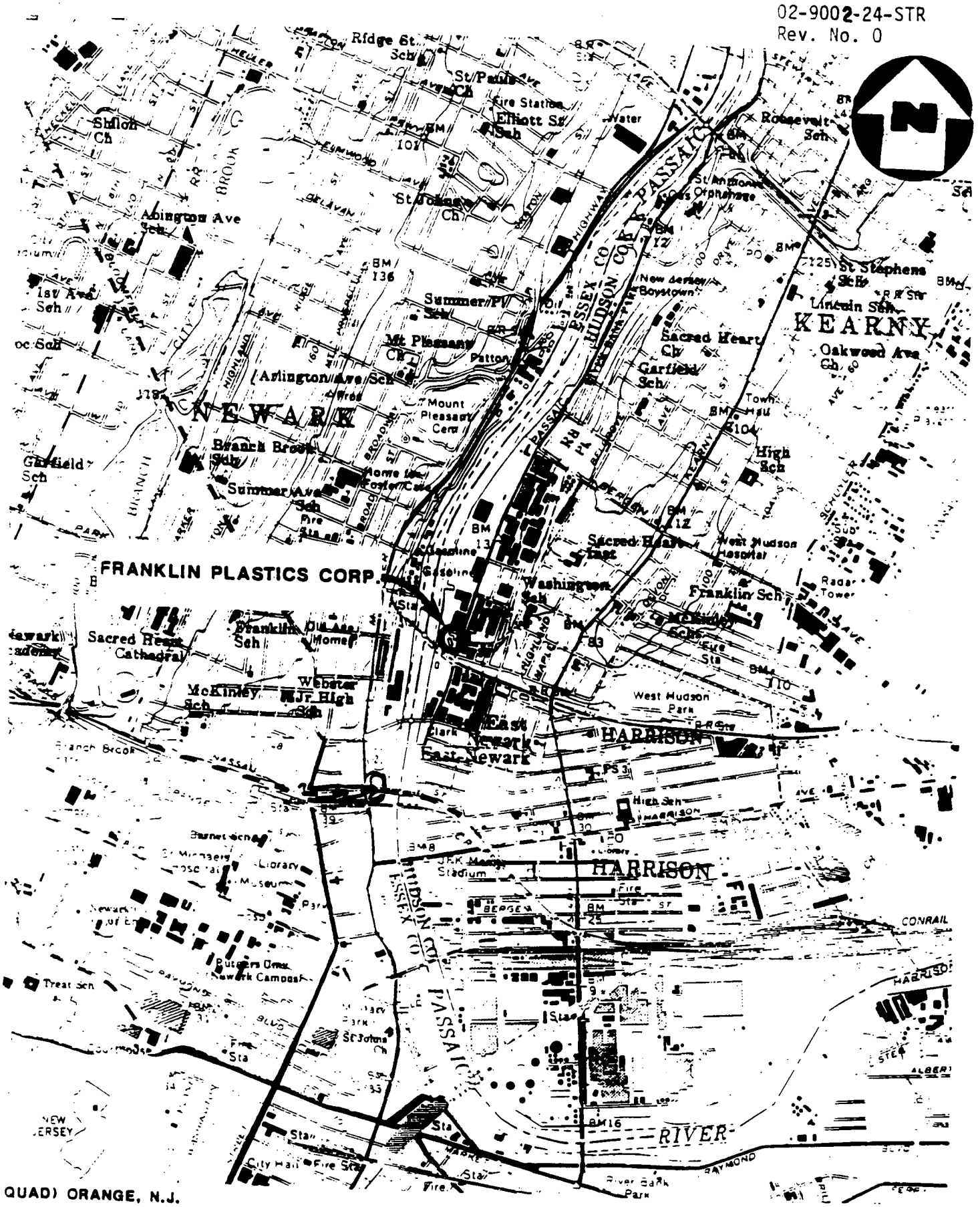
8. Additional Comments:

Eight soil samples, as well as one soil environmental duplicate sample were collected during the site inspection. Soil samples were collected from a depth of 0 to 6 inches. Two aqueous samples, as well as one aqueous environmental duplicate sample were collected. In addition, four sediment samples were also collected for analysis. One trip blank, five rinsate blanks, and two matrix spike/matrix spike duplicates were collected and shipped to the laboratories to meet QA/QC requirements. All samples will be analyzed for Target Compound List (TCL) organic and inorganic parameters except for the trip blank, which will be analyzed for volatile organics only.

NUS Corporation Region 2 FIT split samples will Mr. Moody, of Recon Systems, Inc. at sample locations NJEP-SW-1, NJEP-S-1, NJEP-S-3, NJEP-S-5, and NJEP-S-7. During the sampling site inspection, the only air readings above background were detected at sample location NJEP-SED-3; readings of 10 to 18 ppm were detected on the organic vapor analyzer (OVA) upon opening of the storm drain.

9. Report Prepared By: Kathy Campbell Date: June 11, 1990

10. Approved By: Charles LaPierre Date: 6/19/90



(QUAD) ORANGE, N.J.

SITE LOCATION MAP

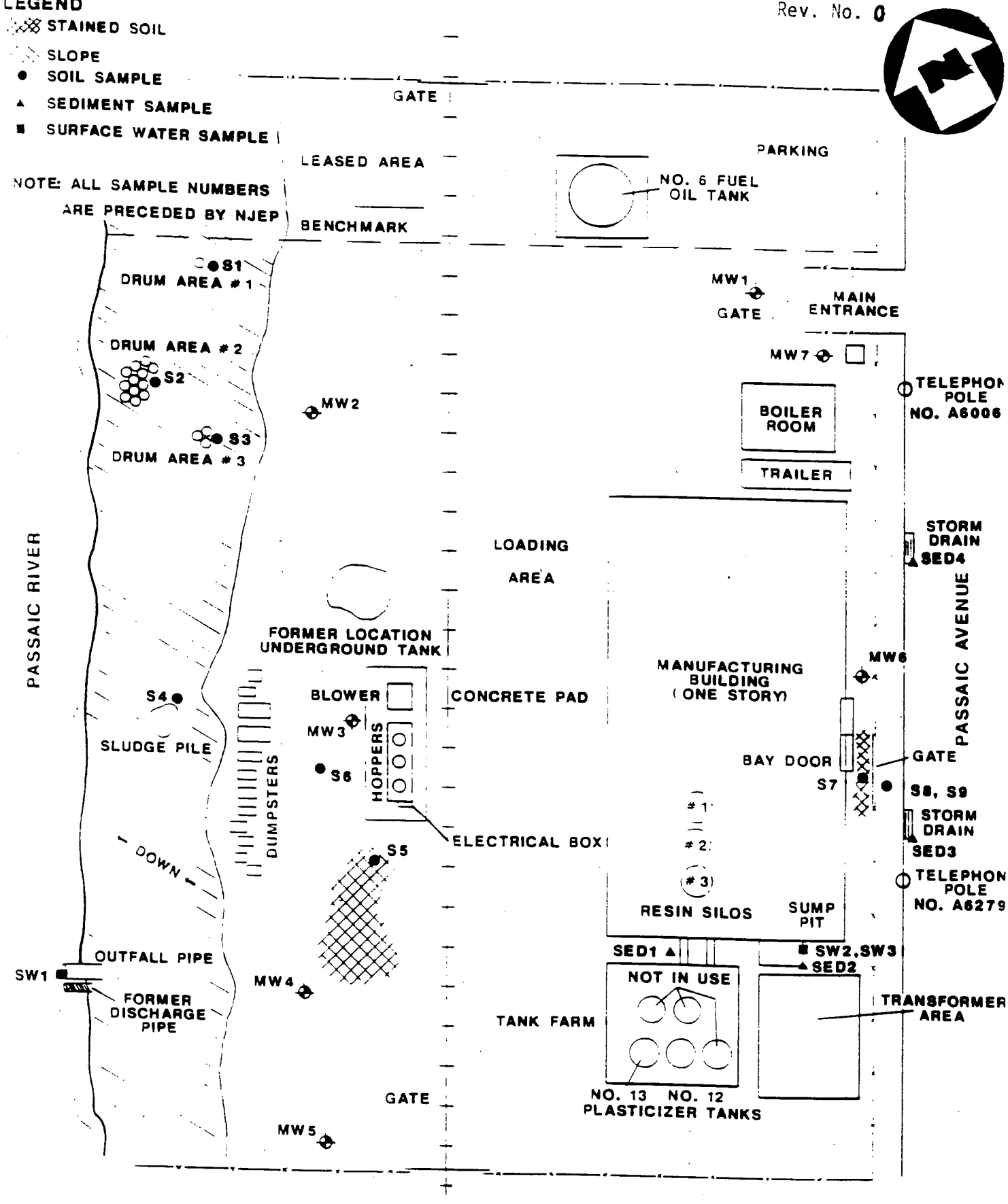
FRANKLIN PLASTICS CORP., KEARNY, N.J.

SCALE: 1" = 2000'

FIGURE 1

80

NUS



SAMPLE LOCATION MAP

FRANKLIN PLASTICS CORP., KEARNY, N.J.

NOT TO SCALE

FIGURE 2

NUS CORPORATION

TABLE I (Cont'd)
SAMPLE DESCRIPTIONS
FRANKLIN PLASTICS CORP.
KEARNY, NEW JERSEY
CASE NO. 141204

NUS Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Number	Collection Time	Sample Type	Sample Location
NJEP-SED-4	BDP-60	MBCN-81	1200	Sediment	Sediment sample collected from storm drain on Passaic Avenue, 48 feet, 6 inches south of telephone pole No. A60063K.
NJEP-S-1	BDP-61	MBCN-82	1520	Soil	Surface soil sample collected from drum area No. 1 at an azimuth of 3° from resin silo No. 1 and at an azimuth of 271° and approximately 75 feet from the corner of asphalt pavement; at a depth of 0 to 6 inches.
NJEP-S-2	BDP-62	MBCN-83	1740	Soil	Surface soil sample collected from drum area No. 2 at an azimuth of 333° from the north corner of the manufacturing building and due north from resin silo No. 1; composite of the contents of two drums containing small tile-like pieces.
NJEP-S-3	BDP-63	MBCN-84	1612	Soil	Surface soil sample collected from drum area No. 3 at an azimuth of 300° from the north corner of the manufacturing building and at an azimuth of 348° from resin silo No. 1; at a depth of 0 to 6 inches.

TABLE I (Cont'd)
SAMPLE DESCRIPTIONS
FRANKLIN PLASTICS CORP.
KEARNY, NEW JERSEY
CASE NO. 141204

NUS Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Number	Collection Time	Sample Type	Sample Location
NJEP-S-4	BDP-64	MBCN-85	1600	Soil	Surface soil sample collected from area near solidified sludge pile at an azimuth of 265° from the north corner of the manufacturing building and at an azimuth of 312° from the south corner of the manufacturing building; at a depth of 0 to 6 inches.
NJEP-S-5	BDP-65	MBCN-86	1639	Soil	Surface soil sample collected from an area of stained soil west of manufacturing building at an azimuth of 330° and a distance of 53 feet, 9 inches from west corner of hopper electrical box; at a depth of 0 to 6 inches.
NJEP-S-6*	BDP-66	MBCN-87	1655	Soil	Surface soil sample collected in area west of hoppers at an azimuth of 332° and a distance of 44 feet, 8 inches from southwest corner of concrete pad; at a depth of 0 to 6 inches.

Note:

*MS/MSD - Indicates that additional sample volume was collected and shipped to the laboratory for matrix spike (MS) and matrix spike duplicate (MSD) analysis.

TABLE I (Cont'd)
SAMPLE DESCRIPTIONS
FRANKLIN PLASTICS CORP.
KEARNY, NEW JERSEY
CASE NO. 141204

NUS Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Number	Collection Time	Sample Type	Sample Location
NJED-S-7	BDP-67	MBCN-88	1246	Soil	Surface soil sample collected in area of stained soil east of manufacturing building at an azimuth of 200° and a distance of 31 feet from the center of the manufacturing building's bay door; at a depth of 0 to 6 inches.
NJEP-S-8	BDP-68	MBCN-89	1135	Soil	Surface soil sample collected from a drainage pathway east of manufacturing building and property fence at an azimuth of 185° from the center of the manufacturing building's bay door and at an azimuth of 5° from the storm drain of NJEP-SED-3; at a depth of 0 to 6 inches.
NJEP-S-9**	BDP-69	MBCN-90	1140	Soil	Same location as sample NJEP-S-8.
NJEP-Rin-1	BDP-70	MBCN-91	1000	Aqueous Rinsate Blank.	Trowel rinsate blank collected in the field.
NJEP-RIN-2	BDP-71	MBCN-92	1020	Aqueous Rinsate Blank	Bowl rinsate blank collected in the field.

Note:

**Duplicate - Indicates that a sample was collected as an environmental duplicate.

TABLE I (Cont'd)
SAMPLE DESCRIPTIONS
FRANKLIN PLASTICS CORP.
KEARNY, NEW JERSEY
CASE NO. 141204

NUS Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Time	Collection Time	Sample Type	Sample Location
NJEP-Rin-3	BDP-72	MBCN-93	1300	Aqueous Rinsate Blank	Dredge rinsate blank collected in the field.
NJEP-Rin-4	BDP-73	MBCN-94	1320	Aqueous RInsate Blank	Scoop rinsate blank collected in the field.
NJEP-RIn-5	BDP-75	MBCN-95	1400	Aqueous Rinsate Blank	Bailer rinsate blank collected in the field.
NJEP-TBLK-1	BDP-74	N/A	N/A	Aqueous Trip Blank	Trip blank; demonstrated analyte-free water obtained from NUS Region 2 FIT, Edison, NJ.

Case# 14204/MBCN95 Site FRANKLIN PLASTICS CORP. Matrix: Soil 13

SDG# MBCN75 Lab VEGAS Water 8

Contractor ROY F WESTON/ESAT Reviewer Vasu Desikan. Other

A.2.1 The case description and exceptions, if any, are noted below with reason(s) for rejection or qualification as estimated value(s) J.

This case consists of 13 soil samples and 8 water samples collected at the Franklin Planters Corp. Site on June 5/1990 and analyzed for all analytes on the Inorganic Target Analyte List with the exception of Cyanide.

Five field blank samples were collected which were identified and associated with samples as follows:

MBCN 91 - Trowel Rinsate } ⇒ MBCN 82 → MBCN 90
MBCN 92 - Bowl Rinsate }

MBCN 93 - Dredge Rinsate ⇒ MBCN 78 → 81

MBCN 94 Scoop Rinsate ⇒ MBCN 75 → MBCN 81

MBCN 95 Bailer Rinsate ⇒ MBCN 75 → MBCN 77.

The samples were analyzed in two parts:

1. SDG MBCN95 - 1 sample MBCN95 was analyzed. Matrix spike, laboratory duplicate analysis and serial dilution analysis were all carried out on this same sample.

STANDARD OPERATING PROCEDURE

Title: Evaluation of Metals Data for the Contract Laboratory Program
Appendix A.2: Data Assessment Narrative

Date: Feb. 1990
Number: HW-2
Revision: 10

A.2.1 (continuation)

2. SDG MBCN75: All remaining samples (MBCN75→94) were analyzed under this SDG.

For the water matrix, matrix spike, laboratory duplicate analysis and serial dilution analysis were carried out on sample MBCN75.

For the soil matrix, matrix spike analysis, laboratory duplicate analysis and serial dilution analysis were carried out on sample MBCN87.

Field duplicates were identified as MBCN76&77 and MBCN89&90.

The data presented in this data package is acceptable with the exceptions noted in the following data assessment narrative.

Part I: SDG MBCN95.

1. Matrix spike recovery for Pb was 75% and hence the Pb result in MBCN95 was estimated.

'J' Pb ⇒ MBCN95

2. Serial Dilution Analysis yielded a % difference of 331.5% for Na which was >100% therefore all associated results >10 x IDL were rejected.

Reject Na → MBCN95

A.2.1 (continuation)

Part 2: SDG 75.

1. The CRDL standard % recoveries for Se (144.0%) and Ni (123.6%) were outside control limits 80-120% and in the 121-150% range. Hence only positive results in the ≥IDL-2 CRDL range for Se and in the ≥IDL-4 range for Ni were estimated and flagged J.

'J' Se: → MBCN79, 80, 81 88

'J' Ni → MBCN78, 79, 80, 81, 86, 87, 88, & 90.

2. The % recovery of the Sb matrix spike for the soil matrix was 60.6% and out of control limits 75-125% in the 10-74% range. Therefore all associated data was estimated.

'J' Sb → MBCN78 → MBCN90

3. The difference for Pb in field duplicate was ≥ CRDL when sample and/or duplicate was < 5 x CRDL. Therefore the associated Pb data was estimated

'J' Pb in MBCN76 & MBCN77.

A.2.1 (continuation)

SDG 75 continued...

b) Pb results upon dilution for the following samples MBCN87 (10X - 104.2 µg/L), MBCN 87D (10X - Analytical spike - 116.0 µg/L), MBCN81 (20X - 127.0 µg/L), MBCN86 (20X - Analytical spike - 102.6 µg/L), MBCN88 (50X - 135.5 µg/L and MBCN89 (10X - Analytical spike 112.8 µg/L) were all higher than the highest calibration standard and should have been diluted. Therefore the following Pb results have been estimated:

'J' Pb → MBCN87, MBCN81, MBCN88.

As there are no criteria for samples such as MBCN87D, MBCN86, MBCN89 where the analytical spike is out of calibration range - no action was taken for these samples except to note it under non compliance of SOW 7/88. Checklist

6. The soil content in sample MBCN79 was 39% which is <50% and therefore all results for this sample were flagged as estimated with the exception of As, Se, Ni, Sb, K, & Na which have already been 'flagged' /rejected due to other criteria.

'J' in MBCN79 → Al, , Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, K, Ag, Tl, Zn.

HS

7/31

A.2.2 Contract-Problems/Non-Compliance

1. As previously mentioned As results for MBCN 79, 81 and Pb results for MBCN 87, 87D, 81, 86, 88 & 89 were all higher than the highest standard and should have been diluted to >CRDL and re-run. These dilutions were not performed.

MMB Reviewer: _____ Date: _____
Signature

Contractor Reviewer: Vasu Desikan Date: July 25/90
Signature

Verified by: Dale S. Rushneck Date: JULY 30, 1990

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN9

SOW NO.: 7/88

EPA Sample No.	Lab Sample ID.
MBCN95	VALI 95
MBCN95D	VALI 95D
MBCN95S	VALI 95S

]

Were ICP interelement correction applied?	Yes/No	YES
Were ICP Background corrections applied?	Yes/No	YES
If yes-were raw data generated before Application of background corrections?	Yes/No	NO

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer readable data submitted on the floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: B.M. Joshi Name: B.M. JOSHI

Date: 7/9/90 Title: Lab. manager

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

1

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN

SOW NO.: 7/88

EPA Sample No.	Lab Sample ID.
MBCN75	VALI 75
MBCN75D	VALI 75D
MBCN75S	VALI 75S
MBCN76	VALI 76
MBCN77	VALI 77
MBCN78	VALI 78
MBCN79	VALI 79
MBCN80	VALI 80
MBCN81	VALI 81
MBCN82	VALI 82
MBCN83	VALI 83
MBCN84	VALI 84
MBCN85	VALI 85
MBCN86	VALI 86
MBCN87	VALI 87
MBCN87D	VALI 87D
MBCN87S	VALI 87S
MBCN88	VALI 88
MBCN89	VALI 89
MBCN90	VALI 90

Were ICP interelement correction applied? Yes/No YES

Were ICP Background corrections applied? Yes/No YES
If yes-were raw data generated before Application of background corrections? Yes/No NO

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer readable data submitted on the floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: B m Joshi Name: B. m Joshi

Date: 7/9/90 Title: Lab. manager

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

2

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN7

SOW NO.: 7/88

EPA Sample No.	Lab Sample ID.
MBCN91	VALI 91
MBCN92	VALI 92
MBCN93	VALI 93
MBCN94	VALI 94

Were ICP interelement correction applied?	Yes/No	YES
Were ICP Background corrections applied?	Yes/No	YES
If yes-were raw data generated before Application of background corrections?	Yes/No	NO

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer readable data submitted on the floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: B.M. Josh Name: B.M. Josh.

Date: 7/9/90 Title: Lab. Manager

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN92

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN7

Matrix (Soil/Water): WATER

Level (Low/Med): LOW

Lab Sample ID: VALI 92

% Solids: 0.0

Date Received: 06/06/90

Concentration Units (ug/L or mg/kg dry weight): UG/L

20

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	28.00	U		P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	2.20	U		F
7440-39-3	Barium	14.00	U		P
7440-41-7	Beryllium	3.00	U		P
7440-43-9	Cadmium	4.00	U		P
7440-70-2	Calcium	51.00	B		P
7440-47-3	Chromium	6.00	U		P
7440-48-4	Cobalt	7.00	U		P
7440-50-8	Copper	3.00	U		P
7439-89-6	Iron	12.00	U		P
7439-92-1	Lead	1.10	U		F
7439-95-4	Magnesium	40.00	U		P
7439-96-5	Manganese	4.00	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	28.00	U		P
7440-09-7	Potassium	396.00	U		P
7482-49-2	Selenium	1.10	U		F
7440-22-4	Silver	4.00	U		P
7440-23-5	Sodium	120.00	B		P
7440-28-0	Thallium	2.20	U		F
7440-62-2	Vanadium	10.00	U		P
7440-66-6	Zinc	4.00	U		P
---	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments :

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN93

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): WATER Lab Sample ID: VALI 93

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	28.00	U		P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	2.20	U		F
7440-39-3	Barium	14.00	U		P
7440-41-7	Beryllium	3.00	U		P
7440-43-9	Cadmium	4.00	U		P
7440-70-2	Calcium	40.00	U		P
7440-47-3	Chromium	19.50			P
7440-48-4	Cobalt	7.00	U		P
7440-50-8	Copper	3.00	U		P
7439-89-6	Iron	37.90	B		P
7439-92-1	Lead	1.10	U		F
7439-95-4	Magnesium	123.00	B		P
7439-96-5	Manganese	4.00	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	28.00	U		P
7440-09-7	Potassium	396.00	U		P
7482-49-2	Selenium	1.10	U		F
7440-22-4	Silver	4.00	U		P
7440-23-5	Sodium	81.60	B		P
7440-28-0	Thallium	2.20	U		F
7440-62-2	Vanadium	10.00	U		P
7440-66-6	Zinc	4.00	U		P
---	Cyanide				NR

21

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments :

96

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN94

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): WATER Lab Sample ID: VALI 94

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	28.00	U		P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	2.20	U		F
7440-39-3	Barium	14.00	U		P
7440-41-7	Beryllium	3.00	U		P
7440-43-9	Cadmium	4.00	U		P
7440-70-2	Calcium	40.00	U		P
7440-47-3	Chromium	6.00	U		P
7440-48-4	Cobalt	7.00	U		P
7440-50-8	Copper	3.00	U		P
7439-89-6	Iron	12.00	U		P
7439-92-1	Lead	1.10	U		F
7439-95-4	Magnesium	40.00	U		P
7439-96-5	Manganese	4.00	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	28.00	U		P
7440-09-7	Potassium	396.00	U		P
7482-49-2	Selenium	1.10	U		F
7440-22-4	Silver	4.00	U		P
7440-23-5	Sodium	250.00	B		P
7440-28-0	Thallium	2.20	U		F
7440-62-2	Vanadium	10.00	U		P
7440-66-6	Zinc	5.10	B		P
---	Cyanide				NR

22

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments :

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN95

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN95

Matrix (Soil/Water): WATER Lab Sample ID: VALI 95

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

2

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	28.00	U		P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	2.20	U		F
7440-39-3	Barium	14.00	U		P
7440-41-7	Beryllium	3.00	U		P
7440-43-9	Cadmium	4.00	U		P
7440-70-2	Calcium	63.20	B		P
7440-47-3	Chromium	6.00	U		P
7440-48-4	Cobalt	7.00	U		P
7440-50-8	Copper	3.00	U		P
7439-89-6	Iron	17.90	B		P
7439-92-1	Lead	1.10	U	NJ	F
7439-95-4	Magnesium	76.60	B		P
7439-96-5	Manganese	4.00	U		P
7439-97-6	Mercury	0.20			CV
7440-02-0	Nickel	28.00	U		P
7440-09-7	Potassium	396.00	U		P
7482-49-2	Selenium	1.10	U		F
7440-22-4	Silver	4.00	U		P
7440-23-5	~~Sodium~~	~~290.00~~	~~B~~		P
7440-28-0	Thallium	2.20	U		F
7440-62-2	Vanadium	10.00	U		P
7440-66-6	Zinc	6.20	B		P
---------	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments :

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO. 3

MBCN75

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): WATER Lab Sample ID: VALI 75

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	28.00	U		P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	3.00	B		F
7440-39-3	Barium	39.90	B		P
7440-41-7	Beryllium	3.00	U		P
7440-43-9	Cadmium	12.20			P
7440-70-2	Calcium	15500.00			P
7440-47-3	Chromium	6.00	U		P
7440-48-4	Cobalt	7.00	U		P
7440-50-8	Copper	28.80			P
7439-89-6	Iron	171.00			P
7439-92-1	Lead	3.40			F
7439-95-4	Magnesium	2980.00	B		P
7439-96-5	Manganese	23.90			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	28.00	U		P
7440-09-7	Potassium	1100.00	B		P
7482-49-2	Selenium	1.10	U		F
7440-22-4	Silver	4.00	U		P
7440-23-5	Sodium	9670.00			P
7440-28-0	Thallium	2.20	U		F
7440-62-2	Vanadium	10.00	U		P
7440-66-6	Zinc	22.50			P
---	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments :

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN76

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): WATER Lab Sample ID: VALI 76

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

4

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	28.00	U		P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	2.40	B		F
7440-39-3	Barium	49.40	B		P
7440-41-7	Beryllium	3.00	U		P
7440-43-9	Cadmium	12.00			P
7440-70-2	Calcium	15100.00			P
7440-47-3	Chromium	6.00	U		P
7440-48-4	Cobalt	7.00	U		P
7440-50-8	Copper	38.70			P
7439-89-6	Iron	176.00			P
7439-92-1	Lead	4.40		J	F
7439-95-4	Magnesium	2900.00	B		P
7439-96-5	Manganese	29.20			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	28.00	U		P
7440-09-7	Potassium	999.00	B		P
7482-49-2	Selenium	1.10	U		F
7440-22-4	Silver	4.00	U		P
7440-23-5	Sodium	9490.00			P
7440-28-0	Thallium	2.20	U		F
7440-62-2	Vanadium	10.00	U		P
7440-66-6	Zinc	24.20			P
---	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments :

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN77

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): WATER Lab Sample ID: VALI 77

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

5

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	28.00	U		P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	2.20	U		F
7440-39-3	Barium	49.40	B		P
7440-41-7	Beryllium	3.00	U		P
7440-43-9	Cadmium	13.10			P
7440-70-2	Calcium	15000.00			P
7440-47-3	Chromium	6.00	U		P
7440-48-4	Cobalt	7.60	B		P
7440-50-8	Copper	41.90			P
7439-89-6	Iron	175.00			P
7439-92-1	Lead	18.70			F
7439-95-4	Magnesium	2910.00	B		P
7439-96-5	Manganese	25.00			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	28.00	U		P
7440-09-7	Potassium	1290.00	B		P
7482-49-2	Selenium	1.10	U		F
7440-22-4	Silver	4.00	U		P
7440-23-5	Sodium	9510.00			P
7440-28-0	Thallium	2.20	U		F
7440-62-2	Vanadium	10.00	U		P
7440-66-6	Zinc	35.00			P
---	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments :

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN78

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 78

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 58.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3610.00			P
7440-36-0	Antimony	27.20		NJ	P
7440-38-2	Arsenic	2.50	B		F
7440-39-3	Barium	338.00			P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	29.20			P
7440-70-2	Calcium J	9090. ~~9090~~.00			P
7440-47-3	Chromium J	79.10 ~~79.10~~			P
7440-48-4	Cobalt	6.80	B		P
7440-50-8	Copper J	327.00 ~~327.00~~			P
7439-89-6	Iron	9060.00			P
7439-92-1	Lead J	380.00 ~~380.00~~			P
7439-95-4	Magnesium	2350.00			P
7439-96-5	Manganese	76.80			P
7439-97-6	Mercury	0.31			CV
7440-02-0	Nickel	36.00		J	P
7440-09-7	Potassium	389.00	B		P
7782-49-2	Selenium	0.37	U		F
7440-22-4	Silver	1.30	U		F
7440-23-5	~~Sodium~~	~~196.00~~	~~B~~		P
7440-28-0	Thallium	0.74	U		F
7440-62-2	Vanadium	20.90			P
7440-66-6	Zinc	747.00			P
---------	Cyanide				NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments :

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN79

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL

Level (Low/Med): LOW Lab Sample ID: VALI 79

% Solids: 39.0 Date Received: 06/06/90

Concentration Units (ug/L or mg/kg dry weight): MG/KG

7

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4040.00		J	P
7440-36-0	Antimony	49.00		N J	P
7440-38-2	Arsenic	68.00			F
7440-39-3	Barium	1010.00			P
7440-41-7	Beryllium	17.50			P
7440-43-9	Cadmium	202.00			P
7440-70-2	Calcium	22600.00			P
7440-47-3	Chromium	55.60			P
7440-48-4	Cobalt	24.40			P
7440-50-8	Copper	3280.00	B		P
7439-89-6	Iron	217000.00			P
7439-92-1	Lead	818.00			P
7439-95-4	Magnesium	4890.00			F
7439-96-5	Manganese	3980.00			P
7439-97-6	Mercury	0.25			P
7440-02-0	Nickel	39.80			CV
7440-09-7	Potassium	420.00			P
7482-49-2	Selenium	5.10	B	J	P
7440-22-4	Silver	2.00			F
7440-23-5	~~Sodium~~	~~262.00~~	U	J	P
7440-28-0	Thallium	1.10	B	J	P
7440-62-2	Vanadium	2800.00	U		F
7440-66-6	Zinc	759.00		J	P
---	Cyanide				NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments :

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN80

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL

Level (Low/Med): LOW

% Solids: 79.9

Lab Sample ID: VALI 80

Date Received: 06/06/90

Concentration Units (ug/L or mg/kg dry weight): MG/KG

8

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5180.00			P
7440-36-0	Antimony	10.60	B	NJ	P
7440-38-2	Arsenic	8.00			F
7440-39-3	Barium	143.00			P
7440-41-7	Beryllium	0.74	U		P
7440-43-9	Cadmium	5.00			P
7440-70-2	Calcium	14200.00			P
7440-47-3	Chromium	71.30			P
7440-48-4	Cobalt	8.80	B		P
7440-50-8	Copper	227.00			P
7439-89-6	Iron	41000.00			P
7439-92-1	Lead	596.00			F
7439-95-4	Magnesium	6190.00			P
7439-96-5	Manganese	273.00			P
7439-97-6	Mercury	0.44			CV
7440-02-0	Nickel	38.90		J	P
7440-09-7	Potassium	540.00	B		P
7482-49-2	Selenium	0.32	B	WJ	F
7440-22-4	Silver	1.40	B		P
7440-23-5	~~Sodium~~	~~366.00~~	~~B~~		P
7440-28-0	Thallium	0.55	U		F
7440-62-2	Vanadium	33.70		J	P
7440-66-6	Zinc	731.00			P
---	Cyanide				NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments :

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN81

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL

Level (Low/Med): LOW Lab Sample ID: VALI 81

% Solids: 75.5 Date Received: 06/06/90

Concentration Units (ug/L or mg/kg dry weight): MG/KG

9

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4640.00			P
7440-36-0	Antimony	8.00	B	N J	P
7440-38-2	Arsenic	26.70		J	F
7440-39-3	Barium	130.00			P
7440-41-7	Beryllium	0.79	U		P
7440-43-9	Cadmium	5.70			P
7440-70-2	Calcium	20500.00			P
7440-47-3	Chromium	48.90			P
7440-48-4	Cobalt	7.30	B		P
7440-50-8	Copper	103.00			P
7439-89-6	Iron	17400.00			P
7439-92-1	Lead	644.00		J	F
7439-95-4	Magnesium	6430.00			P
7439-96-5	Manganese	160.00			P
7439-97-6	Mercury	0.33			CV
7440-02-0	Nickel	33.60		J	P
7440-09-7	Potassium	490.00	B		P
7482-49-2	Selenium	0.31	B	W J	F
7440-22-4	Silver	1.10	U		P
7440-23-5	~~Sodium~~	~~434.00~~	~~B~~		P
7440-28-0	Thallium	0.57	U		F
7440-62-2	Vanadium	30.60		J	P
7440-66-6	Zinc	313.00			P
---------	Cyanide				NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments :

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN82

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL

Level (Low/Med): LOW

Lab Sample ID: VALI 82

% Solids: 90.6

Date Received: 06/06/90

Concentration Units (ug/L or mg/kg dry weight): MG/KG

10

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9690.00			P
7440-36-0	Antimony	6.60	U	NJ	P
7440-38-2	Arsenic	12.50			F
7440-39-3	Barium	108.00			P
7440-41-7	Beryllium	0.66	U		P
7440-43-9	Cadmium	1.80			P
7440-70-2	Calcium	4080.00			P
7440-47-3	Chromium	41.30			P
7440-48-4	Cobalt	27.30			P
7440-50-8	Copper	162.00			P
7439-89-6	Iron	140000.00			P
7439-92-1	Lead	70.00			F
7439-95-4	Magnesium	6320.00			P
7439-96-5	Manganese	798.00			P
7439-97-6	Mercury	0.17			CV
7440-02-0	Nickel	58.70			P
7440-09-7	Potassium	3090.00			P
7482-49-2	Selenium	0.24	U		P
7440-22-4	Silver	0.88	U		F
7440-23-5	~~Sodium~~	~~191.00~~	~~B~~		P
7440-28-0	Thallium	0.49	U	J	P
7440-62-2	Vanadium	36.40			F
7440-66-6	Zinc	133.00			P
---	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments :

10b

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN83

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL

Level (Low/Med): LOW

Lab Sample ID: VALI 83

% Solids: 92.3

Date Received: 06/06/90

Concentration Units (ug/L or mg/kg dry weight): MG/KG

11

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	624.00			P
7440-36-0	Antimony	6.50	U	N	P
7440-38-2	Arsenic	1.10	B		F
7440-39-3	Barium	133.00			P
7440-41-7	Beryllium	0.65	U		P
7440-43-9	Cadmium	29.20			P
7440-70-2	Calcium	201000.00			P
7440-47-3	Chromium	76.50			P
7440-48-4	Cobalt	4.80	B		P
7440-50-8	Copper	23.50			P
7439-89-6	Iron	15200.00			P
7439-92-1	Lead	299.00			F
7439-95-4	Magnesium	15100.00			P
7439-96-5	Manganese	158.00			P
7439-97-6	Mercury	0.16			CV
7440-02-0	Nickel	45.70			P
7440-09-7	Potassium	204.00	B		P
7482-49-2	Selenium	0.24	U	W	F
7440-22-4	Silver	36.90			P
7440-23-5	Sodium	~~113.00~~	~~B~~		P
7440-28-0	Thallium	0.48	U		F
7440-62-2	Vanadium	21.70			P
7440-66-6	Zinc	78.80			P
---	Cyanide				NR

Color Before: GREY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments :

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN84

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 84

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 74.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

12

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5970.00			P
7440-36-0	Antimony	8.00	U	NJ	P
7440-38-2	Arsenic	3.20			F
7440-39-3	Barium	358.00			P
7440-41-7	Beryllium	0.80	U		P
7440-43-9	Cadmium	2.50			P
7440-70-2	Calcium	59500.00			P
7440-47-3	Chromium	51.20			P
7440-48-4	Cobalt	9.80	B		P
7440-50-8	Copper	81.80			P
7439-89-6	Iron	15000.00			P
7439-92-1	Lead	191.00			F
7439-95-4	Magnesium	9910.00			P
7439-96-5	Manganese	244.00			P
7439-97-6	Mercury	0.25			CV
7440-02-0	Nickel	92.50			P
7440-09-7	Potassium	1240.00	B		P
7482-49-2	Selenium	0.29	U		F
7440-22-4	Silver	1.10	U		P
7440-23-5	~~Sodium~~	~~141.00~~	~~B~~		P
7440-28-0	Thallium	0.57	U		F
7440-62-2	Vanadium	97.90		J	P
7440-66-6	Zinc	185.00			P
---------	Cyanide				NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments :

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN85

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 85

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 92.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

13

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1150.00			P
7440-36-0	Antimony	7.20	B	NJ	P
7440-38-2	Arsenic	0.80	B		F
7440-39-3	Barium	59.30			P
7440-41-7	Beryllium	0.64	U		P
7440-43-9	Cadmium	2.90			P
7440-70-2	Calcium	187000.00			P
7440-47-3	Chromium	44.00			P
7440-48-4	Cobalt	4.60	B		P
7440-50-8	Copper	21.80			P
7439-89-6	Iron	5080.00			P
7439-92-1	Lead	133.00			F
7439-95-4	Magnesium	32500.00			P
7439-96-5	Manganese	85.60			P
7439-97-6	Mercury	0.10			CV
7440-02-0	Nickel	40.50			P
7440-09-7	Potassium	812.00	B		P
7482-49-2	Selenium	0.24	U	W	F
7440-22-4	Silver	0.85	U		P
7440-23-5	~~Sodium~~	~~133.00~~	~~B~~		P
7440-28-0	Thallium	0.48	U		F
7440-62-2	Vanadium	9.80	B		P
7440-66-6	Zinc	96.90			P
---	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts:

Comments :

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN86

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 86

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 95.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

14

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1070.00			P
7440-36-0	Antimony	7.90	B	NJ	P
7440-38-2	Arsenic	2.60			F
7440-39-3	Barium	144.00			P
7440-41-7	Beryllium	0.63	U		P
7440-43-9	Cadmium	55.50			P
7440-70-2	Calcium	189000.00			P
7440-47-3	Chromium	55.90			P
7440-48-4	Cobalt	2.80	B		P
7440-50-8	Copper	23.40			P
7439-89-6	Iron	4960.00			P
7439-92-1	Lead	348.00			F
7439-95-4	Magnesium	9080.00			P
7439-96-5	Manganese	103.00			P
7439-97-6	Mercury	0.20			CV
7440-02-0	Nickel	16.30		J	P
7440-09-7	Potassium	217.00	B		P
7482-49-2	Selenium	0.23	U	W	F
7440-22-4	Silver	0.84	U		P
7440-23-5	~~Sodium~~	~~192.00~~	~~B~~		P
7440-28-0	Thallium	0.46	U		F
7440-62-2	Vanadium	13.30			P
7440-66-6	Zinc	115.00			P
---	Cyanide				NR

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments :

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN87

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 87

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 81.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG 15

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7450.00			P
7440-36-0	Antimony	87.70		N	P
7440-38-2	Arsenic	14.00			F
7440-39-3	Barium	1990.00			P
7440-41-7	Beryllium	0.74	U		P
7440-43-9	Cadmium	78.20			P
7440-70-2	Calcium	39400.00			P
7440-47-3	Chromium	38.40			P
7440-48-4	Cobalt	6.90	B		P
7440-50-8	Copper	112.00			P
7439-89-6	Iron	14700.00			P
7439-92-1	Lead	2520.00		J	F
7439-95-4	Magnesium	3970.00			P
7439-96-5	Manganese	292.00			P
7439-97-6	Mercury	0.12			CV
7440-02-0	Nickel	28.40		J	P
7440-09-7	Potassium	934.00	B		P
7482-49-2	Selenium	0.27	U		F
7440-22-4	Silver	0.99	U		P
7440-23-5	~~Sodium~~	~~209.00~~	~~B~~		P
7440-28-0	Thallium	0.53	U		F
7440-62-2	Vanadium	41.40		J	P
7440-66-6	Zinc	878.00			P
---------	Cyanide				NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments :

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN88

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 88

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 90.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

16

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1710.00			P
7440-36-0	Antimony	8.30	B	N J	P
7440-38-2	Arsenic	5.80			F
7440-39-3	Barium	106.00			P
7440-41-7	Beryllium	0.65	U		P
7440-43-9	Cadmium	5.30			P
7440-70-2	Calcium	140000.00			P
7440-47-3	Chromium	279.00			P
7440-48-4	Cobalt	10.50	B		P
7440-50-8	Copper	103.00			P
7439-89-6	Iron	8210.00			P
7439-92-1	Lead	1430.00		J	F
7439-95-4	Magnesium	27300.00			P
7439-96-5	Manganese	140.00			P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	134.00			P
7440-09-7	Potassium	225.00	B		P
7482-49-2	Selenium	0.28	B	W J	F
7440-22-4	Silver	0.87	U		P
7440-23-5	~~Sodium~~	~~90.90~~	~~B~~		P
7440-28-0	Thallium	0.47	U		F
7440-62-2	Vanadium	31.30		J	P
7440-66-6	Zinc	1010.00			P
---	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments :

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN89

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 89

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 91.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

17

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7410.00			P
7440-36-0	Antimony	6.50	U	NJ	P
7440-38-2	Arsenic	6.60			F
7440-39-3	Barium	140.00			P
7440-41-7	Beryllium	0.65	U		P
7440-43-9	Cadmium	1.40			P
7440-70-2	Calcium	3550.00			P
7440-47-3	Chromium	15.80			P
7440-48-4	Cobalt	6.30	B		P
7440-50-8	Copper	56.30			P
7439-89-6	Iron	12900.00			P
7439-92-1	Lead	204.00			F
7439-95-4	Magnesium	2340.00			P
7439-96-5	Manganese	337.00			P
7439-97-6	Mercury	0.16			CV
7440-02-0	Nickel	13.40		J	P
7440-09-7	Potassium	1070.00	B		P
7482-49-2	Selenium	0.24	U		F
7440-22-4	Silver	0.87	U		P
7440-23-5	~~Sodium~~	~~160.00~~	~~B~~		P
7440-28-0	Thallium	0.48	U	W	F
7440-62-2	Vanadium	23.80		J	P
7440-66-6	Zinc	259.00			P
---------	Cyanide				NR

Color Before: RED Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments :

COMPUCHEM LABORATORIES

EPA CASE NARRATIVE--CASE# 14204 SAS# 5169HQ
Contract No. 68-D9-0032 SDG# BDP57
CompuChem Laboratories, Inc.

Sample Numbers: BDP57, BDP58, BDP59, BDP60, BDP61, BDP62, BDP63, BDP64, BDP65, BDP66, BDP67, BDP68, BDP69

This portion of Case #14204 consisted of 13 soil samples for volatile, semivolatile, and pesticide analysis. The samples were received intact on 6-6-90 in properly sealed shipping containers with traffic reports. The pH values of the samples were within the range specified in EPA protocols. Moisture content of the samples ranged from 6% to 58%.

VOLATILES:
All volatile fractions were analyzed within holding time requirements. TCL compounds were present in all samples. Two tentatively identified compounds were present in sample BDP58. Two analyses of sample BDP57 were reported and billed. In the initial 5 gram analysis, the level of acetone exceeded the multipoint range. In the 2.3 gram reanalysis, the levels of several TCL compounds did not compare well with the initial results. The differences were attributed to sample inhomogeneity, and both results were reported with a qualifying notice. All surrogate recovery criteria were met. The QC matrix spike/matrix spike duplicate results were acceptable.

SEMIVOLATILES:
All semivolatile fractions were extracted and analyzed within holding time requirements. TCL compounds were present in all samples including high levels of TCL phthalates. All samples contained tentatively identified compounds, usually high levels of phthalates. Due to the nature of samples BDP58, BDP59, BDP60, and BDP66, they could not be concentrated down to the normal 0.9 ml in the extraction process. Several samples required medium level analysis: BDP57, BDP62, BDP63, BDP64, BDP65, and BDP67. Two analyses were reported and billed for samples BDP58, BDP59, BDP60, BDP61, BDP62, BDP64, BDP66, BDP67, BDP68, and BDP69. In each of these samples, the initial analysis contained levels of TCL compounds which exceeded the multipoint range. The samples were reanalyzed at higher dilutions and due to the loss of some compounds, both analyses were reported and billed. Only one medium level analysis at a 10X dilution of sample BDP65 was reported. Due to the nature of the extract, it could not be analyzed at any lower dilution. The data were reported with a qualifying notice. Surrogate recovery data were not available for samples BDP58DL, BDP59DL, BDP60DL, BDP62DL, BDP64DL, BDP66DL, BDP68DL, BDP69DL, BDP66DLMS, and BDP66DLMSD due to the required secondary dilutions. All other surrogate recovery data met QC criteria. Spike recovery data were not available for BDP69DLMS/MSD due to the required dilution level. The associated blank spike was included which met all

QC criteria. Qualifying notices were included with the MS/MSD data. The medium level MS/MSD results were acceptable. The recovery of pyrene fell below QC limits in the MS. The recoveries of phenol, 1,2,4-trichlorobenzene, and pyrene fell outside QC limits in the MSD.

PESTICIDES:
All pesticide fractions were initially extracted and analyzed within holding time requirements. Samples BDP66MS/MSD required reextraction which could not be performed within holding time criteria. None of the samples contained any reportable levels of TCL compounds. Due to the nature of samples BDP57, BDP62, BDP63, BDP64, BDP65, and BDP67, medium level extraction and analysis was required. Most of the samples required dilutions due to the high levels of non-target compounds present. Surrogate recovery data were not available for samples BDP58, BDP59, BDP60, BDP64, BDP65, BDP66, and BDP66MS/MSD due to the required dilution. Surrogate recovery data was not available for sample BDP68 due to matrix interference. DBC retention time criteria were not met for samples BDP64, BDP65, and BDP66 due to dilutions. DBC retention time criteria were not met for the final INDA in Sequence 11 and the final INDB in Sequence 242. Surrogate recoveries not mentioned above met QC criteria. Spike recovery data were not available for the low level MS/MSD due to the required dilution. The associated blank spike was included which met all QC criteria. Qualifiers were included with the MS/MSD data. The medium level MS/MSD results met QC criteria. The recoveries of endrin and 4,4'-DDT exceeded QC limits in the MS/MSD and the recovery of heptachlor exceeded QC limits in the MSD.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Note: This report was paginated for reference and accountability in decreasing numerical sequence.

Janet G. Livingston 6/30/90
Janet G. Livingston 6-30-90
Sr. Quality Assurance Specialist

COMPUCHEM LABORATORIES, INC. P.O. Box 12652 3308 Chapel Hill/Nelson Highway Research Triangle Park, NC 27709 (919) 549-8263

COMPUCHEM LABORATORIES

EPA CASE NARRATIVE -- CASE 14204
SDG NO. BDP54
Contract No. 68-D9-0032
SAS 5169HQ
Compuchem Laboratories, Inc.

Samples: BDP54, BDP55, BDP56, BDP70, BDP71, BDP72, BDP73, BDP74, BDP75

Attached are pertinent Quality Assurance Notices dealing with the analysis of nine (9) water samples associated with Special Analytical Services (SAS 5169 HQ) Case 14204, SDG No. BDP54. The samples were received intact on June 6,1990 in properly sealed shipping containers with the corresponding traffic reports and chain-of-custody documents. The courier was Federal Express. The samples were logged into the Compuchem Laboratory Management system and scheduled for the analysis of the volatile, semi-volatile, and pesticide fractions.

VOLATILES
The samples were analyzed within the proper holding time requirements. EPA target compound list (TCL) analytes were present in all of the samples ranging in number per fraction from one (1) to four (4). Chloroform was found in all of the samples. The volatile fraction of sample BDP74 (identified as a trip blank) was analyzed as a low level liquid. Chloroform was present in this sample at a concentration level of 2.0 ul/L. Since the preceding sample did not contain elevated levels of this compound, we do not believe the reported value to be the result of carryover. The data is being reported with reference to the enclosed qualifier. None of the samples contained any tentatively identified compounds (TIC).

In the volatile fractions, recovery and RPD values met QC limits in the matrix spike, BDP54 MS, and the matrix spike duplicate, BDP54 MSD. In addition to the spiking compounds, Methylene Chloride, Chloroform, and Bromodichloromethane were present in the MS and the MSD. The associated volatile blank, VBLKYA, did not contain any TCL compounds or TICs. Surrogate recovery values for the samples, the method blanks, and the duplicate sample spikes passed contract required QC limits.

SEMI-VOLATILES
The samples were extracted and analyzed within holding time limits. TCL compound Bis (2-Ethylhexyl) phthalate was

present in samples BDP54, BDP55, BDP56 and in the three associated method blanks. None of the remaining samples contained any TCL compounds. Samples BDP72, BDP73, and BDP75 each contained one TIC. There were no TICs found in the remaining samples.

In the semi-volatile fractions, recovery and RPD values met QC requirements in the matrix spike, BDP54 MS, and the matrix spike duplicate, BDP54 MSD. In addition to the spiking compounds, Bis (2-Ethylhexyl) phthalate was found in the MS and the MSD. Method blanks SBLK95 and SBLK96 each contained one TICs. There were two TICs present in method blank SBLK94. Surrogate recovery values for the samples, the three associated method blanks, and the sample spikes were acceptable. In both the volatile and the semi-volatile fractions, initial and continuing calibration criteria were met.

PESTICIDES

The samples were extracted and analyzed within holding time requirements. There were no reportable levels of TCL compounds found in any of the samples or the associated method blank, PBLK69. There were no outliers present in the %D column of the Form VIIIs of the sequences which were included in this SDG.

In the pesticide fractions, recovery and RPD values met QC limits in the matrix spike, BDP54 MS, and the matrix spike duplicate, BDP54 MSD. Surrogate recovery values for the samples, the method blank, and the duplicate sample spikes met QC limits.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature:

Cynthia McCloud-Edwards

Cynthia E. McCloud- Edwards
Technical Reviewer
30 June 1990

06130190

Note: This report is paginated for reference and accountability in decreasing numerical sequence.

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1. CASE NARRATIVE

This document shall be clearly labeled " Case Narrative " and shall contain : laboratory name ; sample numbers in the Sample Delivery Group (SDG), differentiating between initial analyses and re – analyses ; SDG number ; Contract number ; and detailed documentation of any quality control, sample, shipment and / or analytical problems encountered in processing the samples reported in the data package.

Whenever data from sample re – analyses are submitted, the Contractor shall state in the Case Narrative for each re – analysis, whether it considers the re – analysis to be billable, and if so, why.

The contractor must also include documentation of any internal quality control processes used, a summary of corrective actions taken, and the resolution.

COMPUCHEM LABORATORIES, INC.

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following result qualifiers are used. Additional flags or footnotes explaining results are encourage. However, the definition of each flag must be explicit.

VALUE - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed but not detected. The sample Quantitation limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the sample quantitation limit for phenol (330 U) would be corrected to:

$$\frac{(330\ U) \times df}{D} \quad \text{Where } D = \frac{100 - \%\ \text{Moisture}}{100}$$

and df = dilution factor

$$\text{At 24\% moisture, } D = \frac{100-24}{100} = 0.76$$

$$\frac{(330\ U)}{.76} \times 10 = 4300\ U$$ rounded to the appropriate number of significant figures

For soil sample subjected to GCP clean-up procedures, the CRQL is also multiplied by 2, to account for the fact that only half of the extract is recovered.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example,if the sample quantitation limit is 10 ug/l, but a concentration is 3 ug/l is calculated, report it as 3J. The Sample quantitation limit must be adjusted for both dilution and percent moisture as discussed for the U flag, so that if a sample with 24% moisture and a 1 to 10 dilution factor has a calculated concentration of 300 ug/l and a sample quantitation limit of 430 ug/kg, report the concentration as 300J on Form I.

DATA REPORTING QUALIFIERS - PAGE 2

C - This flag applies to pesticides results where the identification has been confirmed by GC/MS. Single Component pesticides ≥10 ng/ul in the final extract shall be confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Forms I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, The "DL" suffix is appended to the sample number on the Form I for the diluted sample and all concentration values reported on that Form I are flagged with the "D" flag.

A - This flag indicates that TIC is a suspected aldol-condensation product.

X - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the Case Narrative. If more than one is required, use "Y" and "Z", as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B", and "D" flags for some sample.

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QUALITY ASSURANCE NOTICE

Specific guidelines are presented in the EPA CLP Organic Statement of Work for the positive qualitative identification of compounds through mass spectral interpretation. Applying these guidelines absolutely may not be possible when the nature of the sample is less than pure reference material. Where the mass spectral pattern of a compound to be identified demonstrates interferences or coelution from one or more additional compounds, either unknowns, internal standards, or surrogate standards, the "+" sign is added to the top of the dual spectra page.

Linda Fowler 4/10/89
Linda Fowler
Sr. Quality Assurance Specialist

Robert E. Meierer 4/12/89
Robert E. Meierer
Vice President, Quality Assurance

COMPUCHEM LABORATORIES, INC.

LABORATORY NOTICE

On June 15, 1985 CompuChem Laboratories began adding D3-2,4-Dinitrophenol to all standards and samples. The purpose of this addition is to enable the laboratory to have higher and more consistent analytical sensitivity for the native 2,4-Dinitrophenol. The peak corresponding to the deuterated analog is clearly labeled on each RIC as D3#1 and will not be searched and reported as a tentatively identified compound (TIC). This compound is not being used as an internal or surrogate standard.

L. Richard Flynn,
Development Chemist

Bob Meierer,
Director of Quality Assurance

COMPUCHEM LABORATORIES, INC.

DATA REPORTING QUALIFIERS

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DATA REPORTING QUALIFIERS - PAGE 2

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L. Richard Flynn,
Development Chemist

Bob Meierer,
Director of Quality Assurance

COMPUCHEM LABORATORIES, INC.

QUALITY ASSURANCE NOTICE

With the advent of the new organics Statement of Work (SOW 2/88, Revision: 9/88) participants in EPA's Contract Laboratory Program (CLP) are required to provide hard copy and diskette deliverables. CompuChem employs the Finnigan QA Formaster Program (Format A) to generate these requirements using data files from our analytical instrumentation. Currently, and independently, quantitation reports are generated by the instruments and are used with CompuChem-developed software to calculate results. The GC and GC/MS quantitation routines employ the convention of carrying at least one extra significant figure until the mathematical computations are completed. Then, the quantitative results are rounded to the SOW-required number of significant figures for reporting. In addition, the algorithm used by the Formaster Program is slightly different than that employed in Compuchem's software routines. Therefore, results presented in the supportive data supplied with our deliverables packages may be slightly different than those which appear on the hard copy forms generated via Formaster.

This notice serves to alert the end users of these data packages as to the reason why slight differences may be observed.

Robert E. Meierer

Robert E. Meierer
Director of Quality Assurance

COMPUCHEM LABORATORIES, INC P.O Box 12652 3308 Chapel Hill/Nelson Highway Research Triangle Park, NC 27709 (919) 549-8263

2. By fraction (VOA , SV , PEST) and by sample within each fraction – tabulated target compound results (Form I) and tentatively identified compounds (Form I , TIC) (VOA and SV only)

1. CASE NARRATIVE

This document shall be clearly labeled " Case Narrative " and shall contain : laboratory name ; sample numbers in the Sample Delivery Group (SDG) , differentiating between initial analyses and re – analyses ; SDG number ; Contract number ; and detailed documentation of any quality control, sample, shipment and / or analytical problems encountered in processing the samples reported in the data package.

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The contractor must also include documentation of any internal quality control processes used, a summary of corrective actions taken, and the resolution.

COMPUCHEM LABORATORIES

EPA CASE NARRATIVE--CASE# 14204 SAS# 5169HQ
Contract No. 68-D9-0032 SDG# BDP57
CompuChem Laboratories, Inc.

Sample Numbers: BDP57, BDP58, BDP59, BDP60, BDP61, BDP62, BDP63, BDP64, BDP65, BDP66, BDP67, BDP68, BDP69

This portion of Case #14204 consisted of 13 soil samples for volatile, semivolatile, and pesticide analysis. The samples were received intact on 6-6-90 in properly sealed shipping containers with traffic reports. The pH values of the samples were within the range specified in EPA protocols. Moisture content of the samples ranged from 6% to 58%.

VOLATILES:
All volatile fractions were analyzed within holding time requirements. TCL compounds were present in all samples. Two tentatively identified compounds were present in sample BDP58. Two analyses of sample BDP57 were reported and billed. In the initial 5 gram analysis, the level of acetone exceeded the multipoint range. In the 2.3 gram reanalysis, the levels of several TCL compounds did not compare well with the initial results. The differences were attributed to sample inhomogeneity, and both results were reported with a qualifying notice. All surrogate recovery criteria were met. The QC matrix spike/matrix spike duplicate results were acceptable.

SEMIVOLATILES:
All semivolatile fractions were extracted and analyzed within holding time requirements. TCL compounds were present in all samples including high levels of TCL phthalates. All samples contained tentatively identified compounds, usually high levels of phthalates. Due to the nature of samples BDP58, BDP59, BDP60, and BDP66, they could not be concentrated down to the normal 0.9 ml in the extraction process. Several samples required medium level analysis: BDP57, BDP62, BDP63, BDP64, BDP65, and BDP67. Two analyses were reported and billed for samples BDP58, BDP59, BDP60, BDP61, BDP62, BDP64, BDP66, BDP67, BDP68, and BDP69. In each of these samples, the initial analysis contained levels of TCL compounds which exceeded the multipoint range. The samples were reanalyzed at higher dilutions and due to the loss of some compounds, both analyses were reported and billed. Only one medium level analysis at a 10X dilution of sample BDP65 was reported. Due to the nature of the extract, it could not be analyzed at any lower dilution. The data were reported with a qualifying notice. Surrogate recovery data were not available for samples BDP58DL, BDP59DL, BDP60DL, BDP62DL, BDP64DL, BDP66DL, BDP68DL, BDP69DL, BDP66DLMS, and BDP66DLMSD due to the required secondary dilutions. All other surrogate recovery data met QC criteria. Spike recovery data were not available for BDP69DLMS/MSD due to the required dilution level. The associated blank spike was included which met all

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QC criteria. Qualifying notices were included with the MS/MSD data. The medium level MS/MSD results were acceptable. The recovery of pyrene fell below QC limits in the MS. The recoveries of phenol, 1,2,4-trichlorobenzene, and pyrene fell outside QC limits in the MSD.

PESTICIDES:

All pesticide fractions were initially extracted and analyzed within holding time requirements. Samples BDP66MS/MSD required reextraction which could not be performed within holding time criteria. None of the samples contained any reportable levels of TCL compounds. Due to the nature of samples BDP57, BDP62, BDP63, BDP64, BDP65, and BDP67, medium level extraction and analysis was required. Most of the samples required dilutions due to the high levels of non-target compounds present. Surrogate recovery data were not available for samples BDP58, BDP59, BDP60, BDP64, BDP65, BDP66, and BDP66MS/MSD due to the required dilution. Surrogate recovery data was not available for sample BDP68 due to matrix interference. DBC retention time criteria were not met for samples BDP64, BDP65, and BDP66 due to dilutions. DBC retention time criteria were not met for the final INDA in Sequence 11 and the final INDB in Sequence 242. Surrogate recoveries not mentioned above met QC criteria. Spike recovery data were not available for the low level MS/MSD due to the required dilution. The associated blank spike was included which met all QC criteria. Qualifiers were included with the MS/MSD data. The medium level MS/MSD results met QC criteria. The recoveries of endrin and 4,4'-DDT exceeded QC limits in the MS/MSD and the recovery of heptachlor exceeded QC limits in the MSD.

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Janet G. Livingston 6/27/90

Janet G. Livingston 6-30-90
Sr. Quality Assurance Specialist

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DATA REPORTING QUALIFIERS

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VALUE – If the result is a value greater than or equal to the detection limit, report the value.

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$$\frac{(330\ U)}{D} \times df \qquad \text{Where } D = \frac{100 - \%\ \text{Moisture}}{100}$$

and df = dilution factor

$$\text{At 24\% moisture, } D = \frac{100-24}{100} = 0.76$$

$$\frac{(330\ U)}{.76} \times 10 = 4300\ U$$ rounded to the appropriate number of significant figures

For soil sample subjected to GCP clean-up procedures, the CRQL is also multiplied by 2, to account for the fact that only half of the extract is recovered.

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C - This flag applies to pesticides results where the identification has been confirmed by GC/MS. Single Component pesticides ≥10 ng/ul in the final extract shall be confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Forms I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, The "DL" suffix is appended to the sample number on the Form I for the diluted sample and all concentration values reported on that Form I are flagged with the "D" flag.

A - This flag indicates that TIC is a suspected aldol-condensation product.

X - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the Case Narrative. If more than one is required, use "Y" and "Z", as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B", and "D" flags for some sample.

COMPUCHEM LABORATORIES

QUALITY ASSURANCE NOTICE

Specific guidelines are presented in the EPA CLP Organic Statement of Work for the positive qualitative identification of compounds through mass spectral interpretation. Applying these guidelines absolutely may not be possible when the nature of the sample is less than pure reference material. Where the mass spectral pattern of a compound to be identified demonstrates interferences or coelution from one or more additional compounds, either unknowns, internal standards, or surrogate standards, the "+" sign is added to the top of the dual spectra page.

Linda Fowler 4/10/89
Linda Fowler
Sr. Quality Assurance Specialist

Robert E. Meierer 4/12/89
Robert E. Meierer
Vice President, Quality Assurance

COMPUCHEM LABORATORIES, INC. P.O. Box 12652 3308 Chapel Hill/Nelson Highway Research Triangle Park, NC 27709 (919) 549-8263

COMPUCHEM LABORATORIES

LABORATORY NOTICE

On June 15, 1985 CompuChem Laboratories began adding D3-2,4-Dinitrophenol to all standards and samples. The purpose of this addition is to enable the laboratory to have higher and more consistent analytical sensitivity for the native 2,4-Dinitrophenol. The peak corresponding to the deuterated analog is clearly labeled on each RIC as D3#1 and will not be searched and reported as a tentatively identified compound (TIC). This compound is not being used as an internal or surrogate standard.

L. Richard Flynn,
Development Chemist

Bob Meierer,
Director of Quality Assurance

COMPUCHEM LABORATORIES, INC. P.O. Box 12652 3308 Chapel Hill/Nelson Highway Research Triangle Park, NC 27709 (919) 549-8263

COMPUCHEM LABORATORIES

QUALITY ASSURANCE NOTICE

With the advent of the new organics Statement of Work (SOW 2/88, Revision: 9/88) participants in EPA's Contract Laboratory Program (CLP) are required to provide hard copy and diskette deliverables. CompuChem employs the Finnigan QA Formaster Program (Format A) to generate these requirements using data files from our analytical instrumentation. Currently, and independently, quantitation reports are generated by the instruments and are used with CompuChem-developed software to calculate results. The GC and GC/MS quantitation routines employ the convention of carrying at least one extra significant figure until the mathematical computations are completed. Then, the quantitative results are rounded to the SOW-required number of significant figures for reporting. In addition, the algorithm used by the Formaster Program is slightly different than that employed in Compuchem's software routines. Therefore, results presented in the supportive data supplied with our deliverables packages may be slightly different than those which appear on the hard copy forms generated via Formaster.

This notice serves to alert the end users of these data packages as to the reason why slight differences may be observed.

Robert E. Meierer

Robert E. Meierer
Director of Quality Assurance

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Robert E. Meierer

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DATA ASSESSMENT:

8. COMPOUND IDENTIFICATION:

A) VOLATILE AND SEMI-VOLATILE FRACTIONS:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

B) PESTICIDE FRACTION:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10 ng/ml in the final sample extract.

BNA - benzo(b)fluoranthene and benzo(k)fluoranthene coeluted in samples 3DP58, 3DP60, 3DP61, 3DP66, 3DP67, 3DP68, and 3DP69. Therefore, values for these analytes were qualified JN (estimated) (presumptive evidence).

DATA ASSESSMENT:

2. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip field, rinse and water blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field blanks measure cross- contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for the common contaminants), the analytes are qualified as non- detects, "U". The following analytes in the samples shown were qualified with "U" for these reasons:

A) Method blank contamination

*OA - The following analytes in the following samples were qualified not detected (U) due to their presence in the corresponding method blank: methylene chloride and acetone in 3DP57, 3DP58, 3DP59, 3DP60, 3DP61, 3DP62, 3DP63, 3DP64, 3DP65, 3DP67, 3DP68, and 3DP69; methylene chloride in 3DP66; chloroform in 3DP58, 3DP59, 3DP63, and 3DP65; and 2-butanone, 4-methyl-2-pentanone, and 2-hexanone in 3DP58; and 2-butanone in 3DP59.

*A4 - Bis(2-ethylhexyl) phthalate was qualified not detected (U) in samples 3DP54, 3DP55, and 3DP56 because of its presence in the corresponding method blanks.

B) Field or rinse blank contamination ("water blanks" or "distilled water blanks" are validated like any other sample)

*OA - The following analytes in the following samples were qualified not detected (U) because of their presence in the corresponding rinsate blanks: chloroform in 3DP57, 3DP55, and 3DP56; and toluene in 3DP57 and 3DP58.

C) Trip blank contamination

DATA ASSESSMENT:

5. CALIBRATION:

A) PERCENT RELATIVE STANDARD DEVIATION (%RSD) AND PERCENT DIFFERENCE (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be <30% and %D must be <25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ" (if %D or RSD >50%). If there is a gross deviation of %RSD and %D, the non-detects may be rejected ("R").

For the PCB/PESTICIDE fraction, %RSD for aldrin, endrin, DDT, and dibutylchlorendate must not exceed 10%. Percent D must be within 15% on the quantitation column and 20% on the confirmation column.

VOA - The following compounds in the following samples were qualified J (estimated) because the %D in the continuing calibration was greater than 25: methylene chloride and 2-butanone in BDP57, and tetrachloroethene in BDP54, BDP55, BDP56, BDP70, BDP71, BDP72, BDP73, BDP74, and BDP75.

BNA - The following analytes in the following samples were qualified J (estimated) because the %D in the continuing calibration was greater than 50 and less than 90: benzoic acid in BDP66, BDP68, BDP61, BDP59; 3,3'-dichlorobenzidine in BDP68, BDP61, BDP59, BDP58, BDP60, BDP69; and hexachlorocyclopentadiene in BDP62 and BDP63.
- Benzo(b)fluoranthene was qualified J in BDP59 because the %D was greater than 25.
- Benzoic acid was rejected (R) in BDP62 and BDP63 because the %D was greater than 90.

DATA ASSESSMENT:

6. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

Pesticides/ PCBs - Surrogate recovery for SDP68 was 0 due to matrix interference. No qualification of data based on professional judgment.

ATTACHMENT 1
SOP NO. HW-6

DATA ASSESSMENT:

10. OTHER QC DATA OUT OF SPECIFICATION:

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT (continued on next page if necessary):

Pesticides/PCBs - The %D on the Pesticide Evaluation Standards summary is out of QC limits for several samples. As there are several PAHs tentatively identified in the semivolatile fraction, it was determined that the %Ds may have been affected by them. Therefore, there was no qualification of the samples.

- There was a large shift in retention times for IND 0, 6/20/90, 19:23, column 2250/2401. No action was taken because there were no positive results and because the shift occurred on the confirmation column.

12. CONTRACT PROBLEMS____NON-COMPLIANCE:

13. This package contains re-extraction, re-analysis or dilution. Upon reviewing the QA results, the following form I(s) are identified to be used.

OA - Data from the analysis of BDP57 are used instead of data from BDP57RE. The sample had been rerun because, as stated in the Case Narrative, the level of acetone in the initial 5-point analysis exceeded the multipoint range. The value for acetone from the rerun sample was transferred to the data for the original sample.

3NA - Samples BDP58, BDP59, BDP60, BDP61, BDP62, BDP64, BDP66, BDP67, BDP68, and BDP69 were rerun because results for some compounds in the original analysis were outside of linear range. Values for those compounds were transferred from the diluted samples onto the original sample data. The data from the original analysis were used.

DATA ASSESSMENT:

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT (continued):

[redacted]o: [redacted] Case #: 14204

Project: Franklin Plastics Corp.

Lab Name: Compuchem

Reviewer's Initials: sl

Number of Samples: 22

Analytes Rejected Due to Exceeding Review Criteria:

	Surrogates	Holding Time	Calibration	Contamination	ID	Other	Total # Samples	Total # Rejected/ Total # in all Samples
Acids (15)			2/2				21	2/315
B/N (50)				3/3			21	3/1050
VOA (35)				38/15			22	38/770
PEST (20)							21	0/420
PCB (7)							21	0/147
TCDD (1)							0	0/0

Analytes Estimated Due to Exceeding Review Criteria for:

	Surrogates	Holding Time	Calibration	Contamination	ID (coelution)	Other	Total # Samples	Total # Rejected/ Total # in all Samples
Acids (15)			4/4				21	4/315
B/N (50)			9/8		14/7		21	23/1050
VOA (35)			11/10				22	11/770
PEST (20)							21	0/420
PCB (7)							21	0/147
TCDD (1)							0	0/0

DPO: [ ] ACTION [ ] FYI

Region -

ORGANIC REGIONAL DATA ASSESSMENT SUMMARY

CASE NO. 14204

SDG NO. BDP54 and BDP57

SOW

LABORATORY Compuchem

DATA USER NUS FIT 2

REVIEW COMPLETION DATE 8/7/90

NO. OF SAMPLES 9 WATER 13 SOIL ____ OTHER

REVIEWER [ ] ESD [ ] ESAT [ ] OTHER, CONTRACT/CONTRACTOR NUS FIT 2

	VOA	BNA	PEST	OTHER
1. HOLDING TIMES	O	O	O	
2. GC-MS TUNE/ GC PERFORMANCE	O	O	O	
3. INITIAL CALIBRATIONS	O	O	O	
4. CONTINUING CALIBRATIONS	X	X	O	
5. FIELD BLANKS ("F" = not applicable)	F	F	F	
6. LABORATORY BLANKS	X	X	O	
7. SURROGATES	O	O	O	
8. MATRIX SPIKE/DUPLICATES	O	O	O	
9. REGIONAL QC ("F" = not applicable)	F	F	F	
10. INTERNAL STANDARDS	O	O	O	
11. COMPOUND IDENTIFICATION	O	O	O	
12. COMPOUND QUANTITATION	O	O	O	
13. SYSTEM PERFORMANCE	X	X	O	
14. OVERALL ASSESSMENT	X	X	O	

O = No problems or minor problems that do not affect data usability.
X = No more than *about* 5% of the data points are qualified as either estimated or unusable.
M = More than *about* 5% of the data points are qualified as estimated.
Z = More than *about* 5% of the data points are qualified as unusable.

DPO ACTION ITEMS:

AREAS OF CONCERN:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP54

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345127

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045127A19

Level: (low/med) LOW Date Received: 06/06/90

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	4	J
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	14	
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	3	J
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP54

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345127

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045127A19

Level: (low/med) LOW Date Received: 06/06/90

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev.